

**DEPARTMENT OF HEALTH AND HUMAN SERVICES**  
**PUBLIC HEALTH SERVICE**  
**CENTERS FOR DISEASE CONTROL AND PREVENTION**

**Minutes of Meeting**

**ADVISORY COMMITTEE ON IMMUNIZATION PRACTICES**  
**February 23-24, 1994**

**Atlanta, Georgia**

**ADVISORY COMMITTEE ON IMMUNIZATION PRACTICES**  
**Centers for Disease Control and Prevention**  
**February 23-24, 1994**  
**Auditorium A**

**FEBRUARY 23**

8:30 AM	Introduction	Dr. J. Davis Dr. C. Broome
9:00 AM	ACIP's Role in the "Vaccines for Children Program"	Dr. W. Orenstein Mr. D. Mason
9:20 AM	Discussion of Responses to Proposed Federal Register Notice Schedule Recommended for the "Vaccines for Children Program"	Dr. S. Hadler Mr. K. Malone
10:30 AM	<b>BREAK</b>	
11:00 AM	Status of Simplification of Vaccine Schedule	Dr. C. Hall Dr. J. Gindler Dr. C. Hardegree FDA
11:30 AM	Update on the National Vaccine Program	Dr. A. Robbins NVP
11:45 PM	Revision of Varicella Statement and Status of Application for Licensure of Varicella Vaccine	Dr. S. Holmes
12:15 PM	<b>LUNCH</b>	
1:15 PM	High Risk of Vaccine-Associated Paralytic Poliomyelitis in Romania	Dr. P. Strebel
1:45 PM	Sequential IPV-OPV Schedule Final Results of Studies of Combined Schedules Issues of OPV Revertants Cost Benefit Estimates for Combined Schedules	Dr. O. Kew Dr. J. Modlin Dartmouth Medical School Dr. A. Murdin Connaught Dr. P. Ogra Children's Hosp. Galveston Dr. R. Sutter
3:15 PM	<b>BREAK</b>	

**ATTENDEES:**

COMMITTEE MEMBERS PRESENT

Dr. Mary Lou Clements  
Dr. Jeffrey Davis (phone)  
Dr. Kathryn Edwards  
Dr. Neal Halsey (Acting Chair)  
Dr. Rudolph Jackson  
Dr. Carlos Ramirez-Ronda  
Dr. Joel Ward

Ex Officio Members

Dr. Carolyn Hardegree (FDA)  
Dr. G. Rabinovich (LaMontagne)

Liaison Representatives

Dr. Marvin Amstey (ACOG)  
Dr. David Fleming (HIPAC)  
Dr. Pierce Gardner (ACP)  
Dr. William Glezen (IDSA)  
Dr. Caroline B. Hall (AAP)  
Dr. Walter Hierholzer (HICPAC)  
Dr. Kristin Nichol (VA)  
Dr. Georges Peter (AAP)  
Dr. Michael Peterson (DOD)  
Dr. Gregory Poland, (AHA)  
Dr. Anthony Robbins (NVP)  
Dr. William Schaffner (AHA)  
Dr. David Scheiffle (NACI)  
Dr. Richard Zimmerman (AAFP)

Executive Secretary

Dr. Claire Broome

Office of the General Counsel

Mr. Kevin Malone

Epidemiology Program Office

Dr. J. L. Conrad

Office of Program Support

Ms. Kitty Armstrong  
Ms. Connie Blalock  
Ms. Pollye Koenig  
Ms. Renelle Woodall

National Center for Infectious Diseases

Dr. Nancy Arden  
Dr. Joseph Bresee  
Dr. Paul Cieslak  
Dr. Nancy Cox  
Dr. Martin S. Favero  
Rafael Harpaz  
Dr. Gary Sanden  
Dr. Craig Shapiro

National Center for Prevention Services

Rosamond Dewart

National Immunization Program

Dr. William Atkinson  
Dr. Bob Chen  
Dr. Steve Cochi  
Dr. Vance Dietz  
Dr. Gary Euler  
Judy Gantt  
Dr. Jacqueline Gindler  
Dr. Dayla Guris  
Dr. Steve Hadler  
Dr. Kimberly Heath  
Dr. Sandra Holmes  
Muriel Hoyt  
Dr. Sonja Hutchins  
Hector Lzurieta  
Dr. Arthur Manoharan  
Dr. W. Orenstein  
Dr. Mary Reichler  
Dr. Peter Strebel  
Dr. Ray Strikas  
Dr. Roland Sutter  
Dr. F. VanLoon  
Dr. Walter Williams  
Dr. J. Watson  
Melinda Wharton

Office of Public Affairs

Kay Golan

U.S. Public Health Service

Mr. Thomas E. Balbier Jr.  
Ms. Rosemary Havill

Food and Drug Administration

Sheila Bayne-Lisby  
Susan Ellenberg  
Karen Goldenthal  
Roland Levandowski  
Karen Midthun  
Dr. Margaret Mittrane

National Institutes of Health

Dr. R. Rabinovich

National Vaccine Program

Dr. Joel Breman

Navy Environmental Health Center

Dr. Robert Brawley



Army Surgeon General's Office  
incent P. Fonseca

Others Present

Julia Barrett, Merck Vaccine Division  
Jill Chamberlin, Vaccine Bulletin  
Jean Chow, Lederle Praxis Biologics  
Janet Crawford, Merck Vaccine Division  
Rudi Daems, Smith, Kline, Beecham  
Dr. Ruth Ann Dunn, Michigan Department of Public Health  
Dr. David C. Epstein, Prudential Insurance  
Karen A. Fitzner, University of Hong Kong  
Carol Esch, Merck Vaccine Division  
Carol Frankel, Evans/Medeva  
Dan Granoff, Chiron Corp.  
Janet Hardy, Klemm Analysis  
Cheryl Pokalo Jones, Infectious Diseases in Children  
Dr. Samuel Katz, Duke University Medical Center  
Clare Kahn, Smith, Klein, Beecham Pharmacy  
Robert Kohberger, Lederle Praxis  
Dr. Carlton Meschievitz, Connaught Laboratories  
Dr. John Modlin, Dartmouth Medical School  
Wayne Morges, Merck & Co., Inc.  
Andrew Murdin, Connaught Laboratories  
Dr. David Nalin, MRL  
Marjorie Nicholls, Forest Labs  
Gary Norwith, Wyeth-Ayerst Research  
Dr. P.L. Ogra, UTMB  
Dr. Stanley A. Plotkin, Pasteur-Merieux-Connaught  
Lorraine Radick, Lederle-Praxis Biologics  
R. L. Scott, Lederle  
Bob Sharrar, Merck  
Judith Shindman, Connaught Laboratories, Ltd.  
Dan Soland, Smith, Kline, Beecham  
Michael Speidel, Lederle-Praxis Biologics  
Dale R. Spriggs, VRI, Inc.  
Barbara Sweeney, NAPNAP  
Dr. Joanne Tatem, Lederle-Praxis Biologics  
Miriam E. Tucker, Pediatric News  
Dr. Tito R. Ubertini, North American Vaccine  
Ted Vigodsky, WGST/WPCH  
Robert E. Wervel, DVIC  
Dr. Carolyn Weeks-Levy, Lederle-Praxis Biologics  
George Welu, Connaught Laboratories, Inc.  
Dr. Jo White, Merck Research Laboratories  
Tim Wissman, Merck & Co.



## Executive Summary

On Feb. 23-24, 1994, the Advisory Committee on Immunization Practices (ACIP) convened at the Centers for Disease Control and Prevention (CDC). Dr. Neal Halsey presided in the absence of Dr. Jeffrey Davis, State Epidemiologist for Wisconsin and the new ACIP Chairperson.

New liaison members introduced were Dr. Richard Zimmerman, University of Pittsburgh, representing the American Academy of Family Physicians; Dr. William Glezen, Baylor College, representing the Infectious Disease Society of America; and Dr. David Fleming, representing the Hospital Infection Control Practices Advisory Committee (HICPAC).

Following discussion of the area of conflicts of interest by Dr. Claire Broome and Mr. Kevin Malone, CDC counsel, members introduced themselves and disclosed their conflicts of interest, if any.

### ACIP's Role in the Vaccines for Children (VFC) Program

Dr. Walter Orenstein, Director of the National Immunization Program (NIP), outlined the ACIP's role in the VFC. He reviewed that program's eligibility requirements, and providers' roles and explained that the decisions made that day would be the basis for NIP's going forward in the vaccine contracting process.

### Discussion of Responses to Proposed Federal Register (F.R.) Notice Recommended for the VFC Program

Mr. Malone from CDC's General Counsel's Office briefly went over the provisions of the Omnibus Budget Reconciliation Act of 1993 (OBRA) that deal specifically with the ACIP's role in the VFC program.

Dr. Steve Hadler, NIP, then led the discussion and voting. He asked ACIP members to refer to Handout #1 ("Issues for Vote at ACIP Meeting"). He reminded members that they had had a preliminary vote at the last ACIP meeting. The F.R. notice about this preliminary vote (58 FR 625) -- which included the ACIP General Recommendations on Immunization -- appeared December 16, 1993.

He read nine diseases (pertussis, diphtheria, tetanus, Haemophilus influenzae type b, measles, mumps, rubella, poliomyelitis, and hepatitis) and brought up the following proposal for vote:

The ACIP reaffirms that vaccines which are currently used to prevent the 9 diseases listed above should be included in the Vaccine for Children (VFC) program. Specific vaccines to prevent these diseases will be determined in subsequent votes.

This vote does not exclude consideration of vaccines to prevent additional diseases such as influenza and pneumococcal diseases.

Except for two absentee members, the vote was unanimous.

He then read the list of vaccines for diphtheria, tetanus and pertussis (p. 2 of Handout #1) and proposed the following for vote:

The ACIP recommends that the vaccines listed above, including the recently licensed vaccine "Pasteur Merieux Haemophilus influenza b conjugate vaccine (PRP-T) which may be reconstituted with TP vaccine (produced by Connaught Laboratories, Inc.)" be included in the Vaccines for Children program.

The vote carried: 7-0, with 3 abstentions.

Dr. Hadler proposed the third issue for vote:

The recommended schedule for children includes 5 doses of TP vaccine (or DT or DTaP or combined DTP-Hib vaccines where appropriate) by school entry, and 1 dose of Td vaccine given at 14-16 years of age.

"The schedule shown in Table 1 of the Notice shows that doses should be given at the following ages:

2 months - DTP  
4 months - DTP  
6 months - DTP  
15 months - DTaP (DTP)  
4-6 years - DTaP (DTP)  
14-16 years - Td."

However, after discussion, Dr. Halsey changed it, as follows:

The ACIP recommends the number of doses, schedule, and qualifications noted above and in the text of the Dec. 16, 1993 notice. The additions we have made are insertion of the word routine for the sentence that now reads, "The routine schedule shown in Table 1," and Dr. Wrenstein's suggestion regarding the ACIP's endorsing the AP [American Academy of Pediatrics] recommendations for the timing of the fourth dose.

The vote passed: 6-0, with 4 abstentions.

The next item for vote was:

The ACIP recommends that text be included in the final Notice and in the schedule which states preference for the use of DTaP for the 4th and 5th doses of the DTP series.

This vote did not carry. The vote was: 2-5, with 3 abstentions and 2 absentees.

The next vote was on the vaccines to prevent Haemophilus influenza type b disease. The vote was on the following:

The ACIP recommends that the vaccines listed above, including the newly licensed vaccine "Pasteur Merieux Haemophilus influenza b conjugate



vaccine (PRP-T) which may be reconstituted with DTP vaccine (produced by Connaught Laboratories, Inc.)" be included in the Vaccine for Children program.

The vote carried, 5-0, with 4 abstentions.

The next vote was on the schedule for H. flu vaccines. The schedule for children included 3 or 4 doses of a H. flu b (Hib)-containing vaccine by age 2 years, depending on the specific vaccine used. The vote was on the following:

The ACIP recommends the number of doses, schedule, and qualifications noted above and in the text of the Dec. 16, 1993, Notice, with the addition of the Hib conjugate vaccine, which may be reconstituted with DTP as an acceptable alternative for schedule A.

This vote carried, 4-0, with 4 abstentions.

The next vote was on the consistency in the Hib primary series. The vote was on the following:

The ACIP recommends language on interchangeability of Hib vaccines for the primary series, as cited in the current General Recommendations on Immunization, be incorporated into the final Notice for Vaccines for Children.

This vote carried 3-0, with 5 abstentions and 5 absentees.

The next several votes dealt with the use of combination versus single-antigen vaccines. The first proposal for vote was:

The ACIP should strongly endorse--or endorse--the preferential use of the combined vaccines, particularly in the first year of life, but should not restrict the use of or reimbursements for single-antigen Hib vaccines during these visits, and the Department should complete contracts for both single-antigen and multiple-antigen products.

This wording generated a lot of discussion. One change, agreed upon by consensus, was to use the word encourage rather than strongly endorse or endorse. Dr. Halsey asked Drs. Rabinovich and Ward to meet with Mr. Malone at lunch and work out specific wording on which to vote.

The next vote dealt with the interchangeability of vaccines other than Hib. Dr. Hadler first read this background:

When at least one dose of a hepatitis B vaccine produced by one manufacturer is followed by subsequent doses from a different manufacturer, the immune response has been shown to be comparable with that resulting from a full course of vaccination with a single vaccine.

When administered according to licensed indications, different DTP vaccines as single antigens or various combinations, as well as live and



inactivated polio vaccines, can also be used interchangeably. However, published data supporting this recommendation are generally limited.

The issue for vote was:

The ACIP recommends that the final Notice on Vaccines for children contain language equivalent to that noted above permitting interchangeable use of different licensed vaccines to prevent hepatitis B; DTP; and polio disease.

The vote carried unanimously.

The next vote was on polio vaccines. The proposed wording for vote was:

The ACIP recommends that the vaccines listed above [OPV and IPV] be included in the Vaccines for Children program.

The motion passed, 8-0, with 2 abstentions, and 2 absentees.

Dr. Halsey deferred the vote on the details of the polio schedule to later in the day.

The next vote was on measles, mumps and rubella vaccines. The current Notice proposes not only MMR, but also measles and rubella combined vaccine (MR), measles vaccine, mumps vaccine, and rubella vaccine. The vote was on this proposal:

The ACIP recommends that the vaccines listed above be included in the Vaccines for Children Program.

The motion passed, 7-0, with 2 abstentions and 3 absentees.

The next vote concerned the schedule for MMR (2 doses, one at 12-15 months and one at 4-6 years). The proposal for vote was:

The ACIP recommends the number of doses, schedules and qualifications as noted above and in the text of the Dec. 16, 1993 Notice, with the clarification in text and table that single-antigen vaccines may also be used for outbreak control, but that routine vaccination should only be completed with MMR.

The vote carried 7-0, with 3 abstentions.

#### ACIP Statement on Varicella Prevention

Dr. Sandra Holmes outlined the key wording changes in the new draft of the ACIP varicella statement.

#### Update on the National Vaccine Program (NVP)

Dr. Tony Robbins said that the NVP is putting together a new working group on the introduction of new vaccines. The NVP has also gotten involved in a problem around technology transfer. Third, the NVP is working on what Dr. Robbins termed the long-standing problem between FDA and CDC regarding vaccine labels. Finally, the NVP is working on increasing the number of sites at which underinsured classes of children can receive free vaccines.



## Vaccine-Associated Paralytic Polio (VAPP)

r. Peter Strebel reported on the high incidence of VAPP in Romania. He reported the results of a case-control study, which suggests that exposure to intramuscular (IM) injections of antibiotics given during the incubation period of OPV is associated with VAPP. This was followed by a brief overview by Dr. Roland Sutter on VAPP in the United States.

## Sequential IPV-OPV Schedule

Dr. Sutter then introduced several topics and speakers on revision to the virulence of polioviruses contained in OPV when given after IPV sequential IPV-OPV study; follow-up on the Institute of Medicine (IOM) report; and the impact of a sequential IPV-OPV schedule. Dr. Sutter then summarized answers to the questions raised by the recent IOM report, followed by the report on the potential impact of a sequential schedule on VAPP cases and cost-benefit estimates. He then led the final discussion, pointing out that the purpose of the previous presentations was for the ACIP to decide whether or not to change polio vaccination policy and, if so, how. After discussion, it was decided that there was no consensus for a change. The group decided to delay a vote until licensure for a combined vaccine is in the works.

## Postexposure Prophylaxis for Hepatitis C

Dr. Miriam Alter discussed postexposure prophylaxis for hepatitis C, targeted mainly at HCWs. The group voted unanimously to rescind wording about recommending immune globulin G after percutaneous exposures. She also asked the ACIP to decide whether it should recommend a hepatitis C protocol for the follow-up of HCWs who sustain accidental percutaneous and peroral exposure. The ACIP withheld its judgement on this matter until it could view the revised document.

## Voting on the VFC--continued

Discussion then return to voting on what to include in the VFC program. Dr. Hadler returned to the polio issue and the critical footnote that "enhanced, inactivated IPV may be substituted for OPV, using a different schedule." This is really not consistent with current ACIP recommendations, he said. The issue for vote was:

The ACIP recommends the number of doses, schedule and qualifications as noted above and in the text of the current Notice, with the recommended vaccine clarification in text and footnotes that OPV is the recommended vaccine for routine vaccination of normal infants and children. Any changes in recommendations that are endorsed by the ACIP in the June 1994 meeting will be incorporated into the final notice.

The vote carried, 6-0, with 2 abstentions and 2 absentees.

## Votes on Vaccines for Hepatitis B

Discussion then moved to the next votes, on hepatitis B vaccine. Dr. Hadler noted that the F.R. proposed Hepatitis B vaccine and Hepatitis Immune Globulin (HBIG) (for infants born to HBV-carrier mothers). The vote was on this proposal:



The ACIP recommends that the vaccines listed above be included in the Vaccines for Children Program.

Dr. Halsey decided to have two separate votes. The first vote was on including the parenthetical phrase, "for infants born to HBV carrier mothers". This vote did not pass (3-3, with 3 abstentions), so the phrase was deleted.

The second issue for vote was the vaccines to include for hepatitis B. The motion carried, 7-0, with 3 abstentions and 2 absentees.

The next vote was on the attendant footnotes in the F.R. notice which were added to note acceptance by the ACIP of the AAP's alternative schedules. These schedules were to reference the AAP by name. This vote was deferred for Dr. Robbins to draft appropriate language.

The next vote was on the schedule for hepatitis B (p. 19 of Handbook #1), with attendant footnotes.

The ACIP recommends the number of doses, schedule and qualifications as noted above and in the text of the Dec. 16, 1993, Notice.

This vote carried, 6-0, with 4 abstentions and 2 absentees.

The ACIP then returned to the following earlier proposal, which had been revised somewhat:

The ACIP encourages use of DTP-Hib vaccines (combined or separate administration) when receipt of each antigen of the combined vaccine is indicated; however, at this time, the ACIP does not restrict separate administration of DTP and single-antigen Hib vaccines. The Department should complete contracts for both single-antigen and multiple-antigen products.

The proposal passed, 4-0, with the rest abstaining or absent.

The next votes were on the use of brand names in ACIP OBRA documents:

Any use of brand names in ACIP OBRA documents is not intended to mandate purchase of particular brands of vaccine, but rather is intended for identification purposes only.

This passed unanimously. The next proposal for vote was:

Use of the phrase "combined DTP-Hib vaccine" in ACIP OBRA documents includes any DTP and Hib vaccines which are either combined or are licensed by the FDA for combined administration.

The proposal passed, 5-0, with 5 abstentions.

A proposal that the ACIP request NIP staff to review the current ACIP recommendations to identify any inconsistencies with the ACIP OBRA recommendations adopted at this meeting for the purpose of reconciliation of these recommendations at the next meeting of the ACIP was deferred.



This was deferred until the program compiled inconsistencies in these specific recommendations and mailed them to ACIP members before the next meeting.

### Scope of the F.R. Notice

The last set of issues dealt with the scope of the Notice, which involved lengthy discussion about universal immunization of adolescents and high-risk persons. The meeting adjourned for the day with no decisions on this matter.

### Adolescent Vaccination Against Hepatitis B

The meeting began at 8:08 the next day with an update by Dr. H Margolis on the action plan for eliminating hepatitis B virus transmission. After considerable discussion on this matter, the ACIP decided to vote in principle that the Committee is interested in trying to improve delivery of immunizations to all high-risk groups. That includes improved delivery of hepatitis B vaccine to the adolescents, and influenza and pneumococcus vaccines to high-risk groups. There was consensus that this was the long-term desire of the Committee.

Dr. Halsey then summarized discussion by saying that the ACIP had two options: 1) to form working groups and put off the vote until June, and 2) to vote on influenza now and put off pneumococcal vaccine until later. Option #1 carried unanimously.

### IOM Report on Adverse Reactions and Contraindications to Vaccines

Dr. Orenstein announced that the law had changed regarding the vaccine information materials so they can be simplified and shortened. He requested that the ACIP decide which adverse events not already in these forms be added.

Next, Dr. Rabinovich said that PHS will be conducting a scientific review of the IOM Report on March 15. The thoughts of the ACIP will be presented.

Then Dr. Tuttle reviewed the recent activities of the working group, appointed after the October 1993 ACIP meeting to review the impact of the IOM report on ACIP recommendations. She focused on some of the most controversial adverse events--OPV and GBS; tetanus-toxoid-containing vaccines and GBS; and combined MMR and thrombocytopenia.

### GBS and OPV

First, Dr. Tuttle reported on a reanalysis of a Finnish study and an observational study done in the United States, which provided evidence against a causal relationship between GBS and OPV. She read a proposed change to that effect. A vote was taken about the acceptability of this wording to the Committee. The motion carried 6-0, with 3 abstentions.

### TT and GBS

Dr. Tuttle then reviewed estimates of risk of GBS following DT. The group decided to postpone this vote until later.

### MMR Vaccine and Thrombocytopenia

It was decided in discussion that the Committee did not want to rewrite this section now and would await written comments for a vote.

### Incorporating Changes into ACIP Statements

Dr. Tuttle then asked the ACIP to address how these changes would get incorporated into previous ACIP statements. The group considered having an official, brief ACIP response to/commentary on the IOM report in the MMWR. However, no consensus was reached on this issue, and it will be decided at the next ACIP meeting.

### Simplification of the Vaccine Schedule

Dr. Jacqueline Gindler, NIP, summarized work to simplify the differences between the ACIP and AAP recommendations. She reviewed five routine and two flexible options for schedules. She said the NIP would like a working group to be formed and meet within the next month to agree on a schedule.

It was decided to form such a working group and to have member and liaison members (as consultants) on it. Dr. Hall was named chair. Other members or consultants asked to serve on the group were: Dr. Edwards, Halsey, Hardegree, Peter, Rabinovich, Thompson, and Zimmerman. The group was asked to report recommendations back before the June ACIP meeting so the decision could be made then.

### Formation of Working Group for High-Risk Populations

This group was to deal with hepatitis B, the second dose of MMR, influenza, and pneumococcal vaccines. Dr. Halsey proposed the following members: Drs. DeBuono, Fleming (consultant), Schoenbaum, Ward, Schaffner (as consultant), Davis (as Chair), Jackson and Glezen.

### New Language on Vaccines for Children Purchase

Dr. Tony Robbins proposed the following new language to recognize the value of other schedules:

The Committee has adopted schedules for administering vaccines. The Committee also finds that vaccine schedules of the American Academy of Pediatrics published in the 1994 edition of the Report of the Committee on Infectious Diseases (The Red Book) may be followed by vaccines for Children program providers.

It was decided there needed to be a process for the ACIP to formally review the AAP recommendations. Dr. Peter agreed to provide members of the ACIP with the 1994 Red Book.

### Update on the Injury Compensation Program

Dr. Thomas Balbier from the National Vaccine Injury Compensation Program reviewed major accomplishments of the program for 1993.



### Update on Large-Linked Database Studies of Adverse Events

Dr. Hadler gave a brief update on the large-linked databases to monitor adverse reactions. It was suggested that the ACIP get a 2-3-page summary mailing of the plans for this data system and that the topic perhaps be placed on the agenda for the next meeting.

### Status of the Development of New Vaccine Information Statement

Ms. J. Gantt said that CDC has contracted with the University of Rochester School of Medicine and Dentistry to rewrite and simplify vaccine information statements for the antigens in the Vaccine Injury Table (DTP, Hib, MMR, and polio).

### Update on Typhoid Recommendations

Dr. P. Cieslak passed out the revised draft statement for ACIP on typhoid immunization.

### Status of BCG Guidelines

Dr. Broome summarized the work of three advisory groups that are working together on such guidelines. A joint working group was formed to look at the next version of the statement and iron out any problems. Drs. Edwards and Halsey are the two ACIP members on this group. Dr. Halsey is chairperson.

### Update on FDA Committee Meeting on BCG

Dr. Hardegree said that last October FDA had a review of the meta-analysis information that had been presented to ACIP. One of the manufacturers presented new data on BCG for prevention of TB in children. The group felt that the data did support the efficacy of BCG for very narrow indications. FDA is continuing its review.

### IOM Report--Continued

#### DTP and GBS

This topic had been deferred from the morning's discussion of adverse events. Dr. Bob Chen reported his recalculation of the association of GBS following DTP. Review of a study of GBS incidence from Los Angeles showed that there were fewer cases reported following receipt of DTP vaccine than expected by chance alone.

The proposed change for vote was:

[in Side Effects and Adverse Reactions" replace "due to" with associated with, as follows: "Persons with a prior history of GBS associated with a particular vaccine may be at increased risk of recurrent GBS. . ."]

[in "Precautions and Contraindications" section, add the following underlined phrase: "A previous episode of GBS within 6 weeks following a tetanus-containing vaccine is a contraindication to additional doses."]



However, the members were not comfortable voting on this, and the matter was sent back out for review and rewrite, to emphasize the rarity of the event. The program was asked to revise this section and mail--perhaps with additional, separate language for adults and children--to all ACIP members.

### Vaccination Against Hepatitis A

Dr. Craig Shapiro said that both SmithKline Beecham (SKB) and Merck Sharp & Dohme (MSD) have efficacious inactivated hepatitis A vaccines whose reactogenicity profile is acceptable. Dr. David Nalin then reported on data from the Monroe County efficacy trial with this Merck's vaccine.

Dr. Shapiro said his section was drafting guidelines on hepatitis A vaccination. Dr. Halsey asked him to come up with a draft. Dr. Clements volunteered to work with him on preparing this.

### Public Comment

Dr. Halsey asked if any members of the audience wanted to make a public comment. There was none.

### U.S./WHO Influenza Vaccine Recommendations for 94/95

Dr. Nancy Cox briefly reviewed worldwide influenza activity and the vaccine recommendations for the next flu season. The WHO has recommended that the trivalent influenza vaccine prepared for the 1994-1995 season will include: an A/Shangdong/9/93-like (H3N2) strain; an A/Singapore 6/86-like (H1N1) strain; and a B/Panama/45/90-like strain.

Dr. Joe Bresee gave a brief update of U.S. flu activity. Dr. Nancy Arden reviewed the proposed revisions in the ACIP Recommendations for the Prevention and Control of Influenza. These revisions updated the recommendations for use of the vaccine and antiviral agents available for controlling flu, including information concerning rimantadine, antiviral resistance; and dosage precautions.

Dr. Rabinovich reported that the National Vaccine Advisory Committee approved a report on adult immunization. She suggested that it be a future agenda item for an ACIP meeting.

### Working Groups--Continued

Concern was raised about whether there should be three working groups, instead of the two which were identified. (The high-risk one could be separated into two groups). Dr. Halsey asked for a one-hour block of time on the June agenda to deal with adolescent immunization. Dr. Davis, as chairperson of the high-risk working group, would have the option of dividing the working group into two. Consensus was agreement with the suggestion.

The meeting was adjourned.

## Summary of Agreed-Upon Actions

<p>Kevin Malone will prepare a cover letter along with the summary of the committee votes on the recommended vaccines and schedule for the Children program. As acting chair of the February ACIP meeting, he will forward this to the Secretary, HHS.</p> <p>Any written suggestions or comments on the Varicella statement should be forwarded to Gloria Kovach by March 23rd.</p> <p>Miriam Alter will mail to ACIP members, information on Hepatitis C virus infections in the occupational setting.</p> <p>Ray Strikas will consult with Miriam Alter to incorporate changes on Hepatitis C for the health care workers immunization recommendation.</p> <p>Steve Hadler, with the assistance of FDA, will compile a list of inconsistencies between ACIP statements and package labeling. This will be included in the simplification discussions during the June meeting.</p> <p>Paul Cieslak will make the typhoid vaccination recommendation consistent with the FDA package labeling.</p> <p>The working group on simplification of vaccine schedules (Edward Hardegree, Halsey, Peter, Rabinovich, Thompson, Zimmerman) and the group on high risk issues (Davis, DeBuono, Fleming, Glezen, James Schaffner, Ward) will lay out key issues before the June meeting. NIP will provide support for both working groups. Comments on the simplification issues presented by the NIP staff (Gindler) should be provided to Dr. Gindler by March 23rd.</p> <p>A working group (Arden, DeBuono, Schaffner) will review the working group on risk groups and will come up with a plan for any needed changes in the ACIP statement on influenza vaccine by June.</p> <p>ACIP members will be requested to provide written comments to the draft summary of issues raised by the IOM reports on vaccine safety (Will be provided by Drs. Tuttle and Chen). David Nalin of Merck Sharpe and Dohme will write a letter to the National Immunization Program on data on MMR and thrombocytopenia.</p> <p>Bob Chen will draft language for the section on DTP in response to the IOM's Report on Adverse Events.</p> <p>Georges Peter will provide the ACIP with copies of the new Red Book.</p> <p>Bob Chen and John Glasser will provide to ACIP members, a 2- to 3-page summary of the large-linked databases.</p> <p>Hal Margolis will draft proposed changes for hepatitis B and provide a draft to all ACIP members in time to review before the next ACIP meeting.</p> <p>Traig Shapiro will draft guidelines on hepatitis A risk-groups. Mary Lou Clements is to be a consultant.</p>	<p>of the Vaccines for Dr. Halsey,</p> <p>should be</p> <p>C virus</p> <p>s on ion.</p> <p>his will be ng.</p> <p>nsistent with</p> <p>s, Hall, he working son, . NIP will fication o Dr. Gindler</p> <p>ling on risk e ACIP</p> <p>draft summary provided by ll write a</p> <p>to the IOM's</p> <p>ook.</p> <p>3-page</p> <p>ng.</p> <p>Mary Lou</p>
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Nancy Arden will revise the wording for the ACIP antiviral agents section of the influenza recommendation by March 6. Caren Hall and the A will review it before the ACIP members are asked for comments. She will so send to the committee additional data on rimantadine and amantadine by March 6.

Nancy Arden is supposed to contact FDA regarding the age cutoff for rimantadine.

Hal Margolis along with Bill Schaffner and Barbara Ann DeBuon will consider recommendation for vaccination of adolescents, and consult with the high risk working group. A discussion of this topic will be scheduled for the June agenda.



## Full Minutes

On Feb. 23-24, 1994, the Advisory Committee on Immunization Practices (ACIP) convened at the Centers for Disease Control and Prevention (CDC). Dr. Neal Halsey presided in the absence of Dr. Jeffrey Davis, the new ACIP Chairperson. Dr. Halsey opened the meeting at 8:35 a.m. on Feb. 23.

### Introduction

Dr. Claire Broome, Executive Secretary, reported that Dr. Davis was hooked up by conference call. Dr. Steve Schoenbaum had also accepted the invitation to join the ACIP but was unable to attend the meeting.

Dr. Broome clarified the issues of potential conflicts of interest. Members, as always, were asked to disclose potential conflicts of interest and to abstain from voting on--but not from discussing--vaccines made by companies in which they have direct financial interest within the last months (i.e., grants and other funding sources of vaccine studies, employment, stocks, honoraria). Members were also asked to disclose--but not to abstain from voting--if they received travel support for attendance at meetings from a vaccine manufacturer.

Mr. Kevin Malone reiterated that federal law does generally prohibit employees from having financial interest in matters in which they are working; however, the same federal law acknowledges that there is value in having persons who have expertise, which almost inherently involves conflicts of interest. Therefore, the law does provide for waivers under certain circumstances. Each ACIP member has been given a waiver letter and should sign and return it to Ms. Gloria Kovach.

Mr. Malone also clarified that one has direct financial interest if one not only receives funds from a particular manufacturer but also has control over the grant funds. Receiving pooled grant funds is not disclosure if one has no control over the distribution of funds. Travel support to scientific meetings is not considered a direct financial interest; however, receipt of honoraria is. Nevertheless, Mr. Malone asked members to disclose these meetings if they attended in the last year that had travel support from a manufacturer.

Dr. Halsey introduced new liaison members: Dr. Richard Zimmerman, University of Pittsburgh, representing the American Academy of Family Physicians; Dr. William Glezen, Baylor College, representing the Infectious Disease Society of America; and Dr. David Fleming, representing the Hospital Infection Control Practices Advisory Committee (HICPAC).

Members then introduced themselves and disclosed their conflicts of interest, if any. Dr. Neal Halsey from Johns Hopkins School of Hygiene and Public Health reported no direct financial interests in any vaccine manufacturer. He has received grant support in the past 12 months from the Merieux (measles vaccine-related projects); and Connaught (polio studies). He reported receiving travel support to attend vaccine-related conferences from the American Academy of Pediatrics (AAP), SmithKline Beecham (SKB), the FDA, NIH, Ross Laboratories, and the the Institute of Medicine.



<p>(IOM). He has received small honoraria from SKB and Ross Lab announced that he would excuse himself from voting on issues and Connaught.</p>	<p>atories. He lated to SKB</p>
<p>Dr. Kathy Edwards, Professor of Pediatrics at Vanderbilt Univ receiving any direct funding, although in the past she receive acellular pertussis and <u>Haemophilus</u> vaccines. She has received speeches from Lederle-Praxis and Connaught and thus would refrain from votes on vaccines manufactured by those two firms. She has also received funds from Lederle-Praxis, Connaught, Institute Merieux, and</p>	<p>sity, is not funds for honoraria for in from votes ived travel B.</p>
<p>Dr. Rudolph Jackson, Professor of Pediatrics at Morehouse School reported that his only potential conflict of interest was the travel support and an honorarium from Wyeth Laboratories, for vaccine meeting.</p>	<p>l of Medicine, receipt of rotavirus</p>
<p>Dr. Barbara Ann DeBuono, Director of the Health Department in and Clinical Associate Professor of Medicine at Brown University known conflicts of interest.</p>	<p>hode Island y, also had no</p>
<p>Dr. Gena Rabinovich, NIH, had no conflicts of interest. She rules for conflict of interest enjoined members from accepting moneys in the next 12 months. Dr. Broome said CDC is not trying to discourage members from working with vaccines, only to preserve of the Committee. She only asked that forms be updated and discuss as new working arrangements with manufacturers occur.</p>	<p>ked if the new grants or g to the integrity closures made</p>
<p>Dr. Carolyn Hardegree, FDA, had no conflicts of interest.</p>	
<p>Dr. Joel Ward, UCLA, reported no direct financial interest with manufacturer. But as Director of UCLA's Center for Vaccine Research the principal investigator on one research study on pneumococcal vaccine funded by Merck Sharpe &amp; Dohme (MSD). He has received reimbursement from SKD for a hepatitis A meeting in the past excluded himself from voting for any MSD issues.</p>	<p>any vaccine earch he is l conjugate travel months. He</p>
<p>Dr. Carlos Ramirez-Ronda, Professor of Medicine at the University of Puerto Rico School of Medicine, had no financial interests with any manufacturer. He has received travel reimbursement and an honorarium from Roche, but it is not a vaccine manufacturer.</p>	<p>ty of Puerto accine rarium from</p>
<p>Dr. Mary Lou Clements, Director of the Center for Immunization Research, Johns Hopkins University, is participating as a principal investigator on study on hepatitis B funded by Merck Research Laboratories. She received travel support--but no honoraria--to an AIDS vaccine conference supported by Pasteur Merieux. She excused herself from voting on vaccines.</p>	<p>Research, tigator for a e may have onference on Merck</p>
<p>Dr. Jeffrey Davis, State Epidemiologist with the Wisconsin Department and also Adjunct Professor in the Departments of Pediatrics and Medicine at the University of Wisconsin, reported no direct or indirect interest in vaccine manufacturers.</p>	<p>sion of Health of Preventive indirect</p>



Liaison members then introduced themselves. They were not as conflicts of interest. The 50-plus members of the audience t themselves. They included representatives of vaccine manufac academia, state and federal government agencies, and scientif

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#### ACIP's Role in the Vaccines for Children (VFC) Program

Dr. Walter Orenstein, Director of the National Immunization P outlined the ACIP's role in the VFC program. He reviewed tha patient eligibility requirements, and providers' roles and ex decisions made today would be the basis for NIP's going forwa contracting process.

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Mr. D. Dean Mason, NIP, summarized the preliminary analysis o responses to a VFC survey, undertaken to determine the needs to implement this program. Responses were received from all from 59 of 63 projects. State estimates of vaccine purchase year 1995 for eligible children under this program totaled \$4 State requests for direct assistance through the grant mechan providing additional vaccines were for \$131.9 million. The s of the proportion of children nationwide that would be covere program were: 38% eligible through Medicaid; 1% Native Ameri 14% covered because they have no health insurance; and 8% cov presentation to federally qualified health centers. This mak coverage estimate of 61% of children potentially eligible und

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Mr. Mason also reported that 12 of the states have universal (e.g., the state provides all vaccines to all providers); and would like to have this policy.

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Dr. Orenstein said the VFC program is to go into effect Oct. vaccines will have to be shipped to providers by September. solicitations for contracts have to go out at the beginning o

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#### Discussion of Responses to Proposed Federal Register (F.R.) N Recommended for the VFC Program

ice Schedule

Mr. Malone briefly went over the provisions of the Omnibus Bu Reconciliation Act of 1993 (OBRA) that deal specifically with in the VFC program. There are two sections that deal with th The first states that the Secretary of HHS will purchase the list established by the ACIP. The other provision states tha participate in this program must follow the recommendations o regards the appropriate periodicity, dosage, and contraindica to those vaccines--except in such cases as, in the provider's judgment subject to accepted medical practice, such complianc inappropriate. The law also provides for states to provide f the ACIP recommendations.

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The law is written in very broad terms. The word routine is describing what vaccines to choose; instead the phrase pediatric vaccines is used. This, in turn, gives the ACIP broad discretion. He then read the following from the OBRA '93 Statement of Managers:

The Conferees intend that the Advisory Committee on Immunization Practices be allowed to conduct its work in an objective manner, concerned only with matters of public health and medical decisions regarding the listing of recommended vaccines. While undoubtedly, have some budget implications for the program, and the Secretary, it is the Conferees' intention that the ACIP's work be rigorously separated from such concerns. The Conferees are troubled by past examples of budgetary influence in matters of scientific and has [sic] chosen the Advisory Committee on Immunization Practices the Centers for Disease Control and Prevention as a committee less vulnerable than some others to such influence. So, for example, if the IP were to decide that one vaccine that produces side effects and recommendations should be replaced with a more expensive vaccine that does not, either the Secretary nor any other public officer should attempt to effect that judgment. If proposed changes present a budget implication so serious as to cause the Secretary to question their validity, the Secretary should present that concern and a proposed legislative change to the Congress, but until legislative change is made, the elements of the entire States to ACIP-recommended vaccines are to continue in effect.

Mr. Malone said that CDC's General Counsel's Office is interpreting this statement to mean that the "budget shall not drive the scientific." He said the ACIP needed to provide enough information on childhood vaccination today so that contracts could be issued. He said that the chair of the ACIP would write a cover letter to the Secretary of HHS with the Committee's decisions and a notice would be published in the F.R. Mr. Malone also suggested the Committee consider developing a specific document and a dealing with the vaccines and issues covered under this law. Finally, he commended that the ACIP instruct the CDC staff to examine the current ACIP recommendations to make sure that there are no contradictions with today's recommendations so that the documents can be reconciled soon, if necessary.

Dr. Steve Hadler, NIP, then led the discussion and voting. He asked ACIP members to refer to Handout #1 ("Issues for Vote at ACIP meeting"). He reminded members that they had had a preliminary vote at the ACIP meeting. At that time, members proposed that the vaccines to be included at the first ACIP meeting were: pertussis, diphtheria, tetanus, Haemophilus influenzae type b, measles, mumps, rubella, poliomyelitis, and hepatitis B. The schedule was that currently recommended by ACIP. The F.R. notice about this preliminary vote (58 FR 65725)--which included the ACIP recommendations--appeared December 16, 1993.

He said that footnoted changes to each antigen appeared on Handout #1. He said that CDC had strived to make the proposed wording for recommendations fully compatible with the current AAP recommendations. Differences are acknowledged in footnotes.



Eleven substantive responses were received as a result of the R. notice. One was from a state health department; 8 from practitioners; from the American Academy of Family Practitioners; and 2 from manufacturers. Several issues about scheduling, combined vaccines, and scope were raised during the discussion with states about the vaccines for the VFC program. Dr. Hadler reiterated that a self-contained document for physicians would be the ideal complete guideline. He also asked the ACIP whether preparing the final document should be overseen by a working group or delegated to CDC staff. Dr. Hadler also said that the ACIP will determine the number of doses that are recommended as part of the routine schedule.

An ACIP member asked for reassurance that there would be an effort made by the program, when there are products that are considered equivalent by more than one manufacturer, to purchase vaccine in a reasonably equitable fashion.

Dean Mason, NIP, responded that the legislation gives CDC the option, for the first time, of providing awards to more than one manufacturer or similar products. CDC can encourage vaccine manufacturer participation by awarding not only to the low bidder but a certain portion to the high bidder as well, so long as that bid is within the price caps established. In that way, manufacturers from year to year would remain in the market. The contract e contract share for more solicitations, to be published soon, would guarantee a market than one provider.

Regarding pending vaccines, such as varicella, Mr. Malone said that the formal ACIP vote would be needed to add any vaccines to the schedule or, for that matter, to change the schedule itself. Dr. Halsey announced that Ms. Kovach was recording all votes and would announce them after each vote.

Dr. Hadler brought up the first issue for vote, which was which vaccines should be included in the program. The current notice proposes the vaccines to prevent the nine diseases listed here (Handout #1; [pertussis, diphtheria, tetanus, H. flu, measles, mumps, rubella, poliomyelitis, and hepatitis B]). The proposed language for a vote was:

The ACIP reaffirms that vaccines which are currently used to prevent the 9 diseases listed above should be included in the Vaccine for Children (VFC) program. Specific vaccines to prevent these diseases will be determined in subsequent votes.

This vote does not exclude consideration of vaccines to event additional diseases such as influenza and pneumococcal diseases.

Mr. Malone ruled that since this matter didn't reference specific vaccines, it was essentially a de minimus effort and therefore everyone could vote on this particular matter. He also said that members who were using themselves because of a financial interest, should abstain.

Only members of the ACIP voted on this. The vote carried unanimously, though Drs. Stephen Schoenbaum and Fred Thompson were absent.



## Vaccines to Prevent Diphtheria, Tetanus, and Pertussis

The next several issues dealt with vaccines to prevent pertussis, diphtheria and tetanus. The current F.R. notice proposes that the following vaccines may be used for prevention of these diseases:

- Diphtheria and tetanus toxoids and whole cell pertussis vaccine (DTP)
- Diphtheria and tetanus toxoids and acellular pertussis vaccine (DTaP)
- Diphtheria and tetanus toxoids (pediatrics) (DT)
- Tetanus and diphtheria toxoids (for children 7 years and older and adults) (Td)
- Diphtheria and tetanus toxoids with whole cell pertussis combined with Haemophilus influenza b conjugate vaccine.

Dr. Hadler proposed the following for vote:

The ACIP recommends that the vaccines listed above, including the recently licensed vaccine "Pasteur Merieux Haemophilus influenza b conjugate vaccine (PRP-T) which may be reconstituted with DTP vaccine (produced by Connaught Laboratories, Inc.)" be included in the Vaccines for Children program.

Dr. Hadler noted that the following manufacturers were involved in production or distribution of such vaccines: Connaught Labs, Lederle Labs, Massachusetts Public Health Biologic Labs, the Michigan Department of Public Health, Wyeth-Ayerst, and Pasteur Connaught.

Dr. Carolyn Hardegree of the FDA clarified, for the record, that the DT acellular pertussis, like the Td, is recommended for specific groups. Secondly, she requested that the record should show that the DTP vaccine produced by Connaught is Connaught Incorporated, specifically. And thus, that's the approval that was made--not for any other vaccine to be used to reconstitute PRP-T.

At Mr. Malone's suggestion, Dr. Halsey re-read the proposal for vote. Mr. Malone also clarified that Dr. Davis (not physically present, but connected by conference call), could vote.

The vote was taken and the motion passed--7 for (Drs. Clements, Davis, DeBuono, Ramirez-Ronda, Ward, Rabinovich, and Hardegree); zero nays; 3 abstentions (Drs. Edwards, Halsey, and Jackson); and 2 absentees (Drs. Schoenbaum and Thompson).

Dr. Hadler said that the next proposal dealt with the schedule and the footnotes that go along with the DPT schedule:

The recommended schedule for children includes 5 doses of DTP vaccine (or DT or DTaP or combined DTP-Hib vaccines where appropriate) by school entry, and 1 dose of Td vaccine given at 14-16 years of age.



The schedule is as shown--this is verbatim from Table 1 of the and the following footnotes clarify these recommendations. The generic one--that "the recommended immunization schedule may vary for infants and children who do not begin their series on time" and refers for accelerated immunization in the General Recommendations on

.R. notice-- first is a y for infants o the table mmunization.

The second footnote stated that this series could begin at 6 weeks of age. The third footnote stated that DT may be used in place of DTP when pertussis vaccine is contraindicated. The fourth footnote was, "the fourth dose of DTP can be given as early as 12 months of age provided that the interval since the previous dose of DTP is at least 6 months. DTaP preparations are currently recommended only for use as the 4th and/or 5th doses of the DTP series among children ages 15 months through 6 years." And, finally, a footnote stated that these vaccines may be given at 18 months.

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Dr. Hardegree noted her concern that this approach to voting did not address the issue of simultaneous administration of other vaccines. Dr. Halsey said that a later presentation by Dr. Hadler and Dr. Caroline Haller attempts to modify the presentation of the schedule and perhaps simplify the presentation would address this.

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A representative from a manufacturer said that some manufacturers disagree with package inserts and asked if FDA would let manufacturers change their package inserts. Dr. Hardegree said that differences between the ACIP recommendations and labels was a major concern at the FDA, which was working on how this could be resolved. She also stated that in many of the issues that were going to be discussed, there might be such differences and, for that reason, as an ex officio member, she would often abstain from voting.

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Dr. Halsey then read the proposal for vote, which follows:

The ACIP recommends the number of doses, schedule, and qualifications noted above and in the text of the Dec. 16, 1993 notice. The additions we have made are insertion of the word routine for the sentence that now reads, "The routine schedule shown in Table 1," and Dr. Ostein's suggestions regarding the ACIP's endorsing the AAP recommendations for the timing of the fourth dose.

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The proposal passed (6 for [Drs. Clements, Davis, DeBuono, Ramirez-Ronda, Ward, and Rabinovich]; 4 abstentions [Drs. Edwards, Halsey, Jackson and Hardegree]; and 2 absentees [Drs. Schoenbaum and Thompson]).

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Dr. Hadler then read the following proposal for vote:

The ACIP recommends that text be included in the final Notice and in the schedule which states preference for the use of DTaP for the 4th and 5th doses of the DTP series.

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He pointed out that the AAP does not state a preference at this time, and that the use of DTaP--about 3-1/2 million doses were sold last year--makes up about 15%-20% of the DTP market so it has seen much wider use during the last year. He added that the managers' language in OBRA states that the ACIP be

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allowed to conduct its work in an objective manner, concerned only with issues of public health and medicine. If the ACIP were to decide that one vaccine that produces side effects and reactions should be replaced with a more expensive one that does not, neither the Secretary nor any other public health officer should attempt to affect that judgment.

Dr. Peter did not have the AAP wording with him, but said he didn't think the Red Book meant to discourage the use of DTaP.

In discussion, ACIP and liaison members expressed concern about giving specific preference.

Dr. Halsey then read the suggested wording for vote:

The ACIP recommends that text be included in the final Notice and in the immunization schedule which states preference for the use of DTaP for the 4th and 5th doses of the DTP series.

The proposal failed. The vote was 2 for (Drs. DeBuono and Ralovich); 5 against (Drs. Clements, Davis, Ramirez-Ronda, Ward, and Hardegree); 3 abstaining ([Drs. Edwards, Halsey, and Jackson); and 2 absent (Schoenbaum and Thompson).

#### Vaccines to Prevent H. influenza type b Disease

The next issues dealt with H. influenza type b (Hib) vaccines again, first with which vaccines, then with the schedule, and then with classification issues. The current notice proposes the following vaccines may be used to prevent Hib disease: Hib conjugate vaccines; Diphtheria and tetanus toxoids with whole cell pertussis combined with Haemophilus influenza conjugate vaccine. Dr. Hadler said that the following newly licensed vaccine should be added to this list: Pasteur Merieux Haemophilus influenza b conjugate vaccine (PRP-T) which may be reconstituted with DTP vaccine (produced by Connaught Laboratories, Inc.). The latter is a new product; there are no other new products.

Dr. Hadler pointed out that the manufacturers of Hib vaccines include Connaught Labs, Inc., which is a subsidiary of Pasteur-Merieux Lederle-Praxis; and MSD. Since one of the PRP-Ts is being distributed by SKB, Mr. Malone was asked whether SKB was a conflict of interest. He said that, to be cautious, persons with such conflicts should refrain from voting, but that he'd clarify whether this stance is overly cautious at a future meeting.

Dr. Hardegree added, for the record, that the license on the PRP-T is issued to Pasteur Merieux, so there are in fact four companies that are licensed for conjugate vaccines: Connaught, Pasteur Merieux, Lederle Praxis, and MSD.

Dr. Halsey read the following proposal for vote:

The ACIP recommends that the vaccines listed above, including the newly licensed vaccine "Pasteur Merieux Haemophilus influenza b conjugate vaccine (PRP-T) which may be reconstituted with DTP vaccine (produced by



Connaught Laboratories, Inc.)" be included in the Vaccine for Children program.

The vote carried (5 in favor [Drs. Davis, Jackson, Ramirez-Ron, Rabinovich, and Hardegree]; none opposed; 4 abstaining [Drs. Clements, Edwards, Halsey, and Ward], and 3 absent [Drs. DeBuono, Schoenbaum, and Thompson]).

Dr. Hadler next dealt with the schedule for Hib vaccines. The wording was: "The schedule includes 3 or 4 doses of a Hib-containing vaccine by age 2 years, depending on the specific vaccine (see Table 1)." It shows Schedule A (2, 4 and 6 months and 12-15 months) and Schedule B (2 and 4 months and 12-15 months). The footnotes clarify which products are schedule A (HbOC, PRP-T or DTP-HbOC) and Schedule B (PRP-OMP). It has the same footnote that the DTP one had on children beginning late. It also has the same footnote that this series can begin at 6 weeks of age. As a footnote, any licensed conjugate vaccine may be used as a booster dose at age 12-15 months.

Dr. Hadler then read the following for vote:

The ACIP recommends the number of doses, schedule, and qualifications noted above and in the text of the Dec. 16, 1993, Notice, with the addition of the Hib conjugate vaccine PRP-T, which may be reconstituted with DTP as an acceptable alternative for schedule A.

The vote carried (4 in favor [Drs. Davis, Jackson, Ramirez-Ron, and Hardegree]; none opposed; 4 abstaining [Drs. Clements, Edwards, Halsey and Ward]; and 4 absent [Drs. DeBuono, Schoenbaum, Thompson, and Rabinovich]).

Dr. Hadler next dealt with two specific issues that were raised in the comments. The first one dealt with consistency in the Hib primary series. The comment received said, "The preference for completion of the primary [Hib] series with a single Hib conjugate should be expressly and clearly stated in the schedule."

Dr. Hadler pointed out that the Hib vaccine recommendations said: "The primary series should preferably be completed with the same Hib conjugate. If, however, different vaccines are administered, a total of 3 doses of Hib conjugate vaccines is adequate. Any combination of Hib conjugate vaccines that is licensed for use among infants may be used to complete the series."

The General Recommendations have essentially the same text, although the leading sentence is, "The primary vaccine series should be completed with the same Hib vaccine, if feasible."

For vote was the following:

The ACIP recommends language on interchangeability of Hib vaccines for the primary series as cited in the current General Recommendations on Immunization be incorporated into the final Notice for Vaccine for Children.



The vote carried (3 in favor [Drs. Davis, Jackson and Ramirez]; none, opposed; 5 abstaining [Drs. Clements, Edwards, Halsey, Ward, and Hardegree]; and 5 absent [Drs. DeBuono, Schoenbaum, Thompson, Ward, and Rabinovich]).

For the next issue, there were a series of overheads that dealt with the use of combinations versus single-antigen vaccines. The current practice is silent on the issue of preferential use of DTP-Hib as opposed to the individual DTP and Hib vaccines.

One response to the F.R. notice stated that the lack of preference "will foster a two-tiered immunization system which denies children in the public sector access to the latest and best vaccine technology." Dr. Hadler pointed out that the language in the law [OBRA 93] basically denies federal financial participation for inappropriate administration of single-antigen vaccines. It says the federal government would not reimburse for the inappropriate use of single-antigen vaccines in "any case in which the administration of a combined-antigen vaccine was medically appropriate (as determined by the Secretary)."

Dr. Hadler said that the single-antigen clauses cited in Medicaid and OBRA were intended to discourage a known practice of administering measles, mumps, and rubella vaccines as separate antigens at separate visits, practice which increased both the cost of vaccine and of reimbursement or vaccine administration, and decreased the chance children would be up-to-date. This practice persisted in some areas despite recommendations to the contrary for over a decade.

The combined DTP-Hib vaccines have only recently become available, but they are a welcome addition to the vaccine armamentarium and permit fewer injections. However, right now these vaccines account for only a modest proportion of Hib and DTP vaccination. We currently have four manufacturers producing DTP and three producing Hib. Two produce a licensed DTP-Hib formulation, while at least one other is working on a combination that includes five inactivated antigens.

He concluded that, to optimally assure competition in development of combined vaccines, development and use of combined vaccines should be encouraged. To assure participation of maximum numbers of manufacturers and providers, the use of individual DTP and Hib vaccines should not be limited until the new combined vaccines are more widely used and others become available.

The proposal for vote was:

The ACIP should strongly endorse--or endorse--the preferential use of the combined vaccines, particularly in the first year of life, but should not restrict the use of reimbursements for single antigen Hib vaccines during these visits, and the Department should complete contracts for both single-antigen and multiple-antigen products.

Dr. Sam Katz, speaking from the floor, addressed Dr. Hadler's statement that "The use of these vaccines accounts for only a modest proportion." The reason for that, Dr. Katz said, was that many places have large backlogs of



the single products and would not buy the combined product until they used up the old single antigens. An unidentified Lederle-Praxis representative agreed, saying their estimates were that 75%-80% of private pediatricians have converted to the use of Tetramune.

In subsequent discussion, members expressed concern but the words preferential and strongly in the proposal. Dr. Orenstein stated that concerns over children getting all of the antigens separately might be leading to lower coverage rates and that, from a program standpoint, NIP was in favor of encouraging the combination products, whenever possible, as it may improve overall immunization coverage rates. Another ACIP member stated that he liked the term preferential.

Dr. Rabinovich of NIH expressed concern about reactogenicity of the individual components and the safety of coadministration. Specifically, with the combination product, she said, if you recommend only the combination for the 4th dose of Hib-DTP (the focus of the discussion now being Hib) then you're saying not to use the acellular pertussis for the 4th dose, where there is a stated Public Health Service priority for the development of less-reactogenic acellular pertussis vaccines that has been the source of the legislation for the National Vaccine Program and the National Vaccine Injury Compensation Program.

Dr. Broome reiterated that there are specific instances in which a single-antigen Hib might be preferred.

Dr. Halsey read the handout wording this proposal, as it was modified somewhat from that on Dr. Hadler's overhead:

The ACIP encourages the use of DTP-Hib vaccines (combined or licensed for combined administration), particularly in the first year of life, but should not restrict the use of or reimbursement for single-antigen Hib vaccines during these visits, and the Department should complete contracts for both single-antigen and multiple-antigen products.

It was decided that Drs. Rabinovich, Ward, and Hadler should meet with Mr. Malone over lunch and hammer out some specific wording to finalize this proposal.

#### Interchangeability of Vaccines other than Hib

The next issue dealt with interchangeability of vaccines other than Hib ones. This was not addressed in the F.R. notice directly. However, it is addressed in the General Recommendations, which are cited in the current notice. The language in the General Recommendations reads:

When at least one dose of a hepatitis B vaccine produced by one manufacturer is followed by subsequent doses from a different manufacturer, the immune response has been shown to be comparable with that resulting from a full course of vaccination with a single vaccine.



When administered according to licensed indications, different DTP vaccines as single antigens or various combinations, as well as live and inactivated polio vaccines, can also be used interchangeably. However, published data supporting this recommendation are generally limited.

Then the issue for vote was:

The ACIP recommends that the final Notice on Vaccines for Children contain language equivalent to that noted above permitting interchangeable use of different licensed vaccines to prevent hepatitis B; DTP; and polio disease.

Although this one dealt with hepatitis B, DTP, and polio, Mr. Malone said this was a generic issue so all could vote. The vote was unanimous for the proposal (with 2 absentees, Drs. Schoenbaum and Thompson.)

### Polio Vaccines

Dr. Hadler said that the F.R. Notice proposes that either oral polio vaccine (OPV) or enhanced inactivated polio vaccine (IPV) may be used. The vote would be:

The ACIP recommends that the vaccines listed above be included in the Vaccines for Children Program.

The measure passed (7 for [Drs. Clements, Davis, DeBuono, Jackson, Ward, Rabinovich and Hardegree]; none opposed; 2 abstainers [Drs. Edwards and Halsey]; and 2 absentees [Drs. Schoenbaum and Thompson]).

A vote on details of the polio schedule was deferred to later in the day.

### Vaccines to Prevent Measles, Mumps, and Rubella

Dr. Hadler said that the next vote would be on vaccines to purchase for measles, mumps and rubella. The current Notice proposes not only MMR, but also measles and rubella combined vaccine (MR), measles vaccine, mumps vaccine, and rubella vaccine. The vote would be:

The ACIP recommends that the vaccines listed above be included in the Vaccines for Children Program.

Persons who had received funds from MSD were the only ones excluded from voting. The vote carried (7 in favor [Drs. Davis, Edwards, Halsey, Jackson, Ramirez-Ronda, Rabinovich, and Hardegree]; zero noes; 2 abstentions [Drs. Clements and Ward]; and 3 absentees [Drs. DeBuono, Schoenbaum, and Thompson]).

The next issue dealt with the specifics of the MMR schedule. The current Notice is as follows: "The recommended schedule for children includes 2 doses of MMR vaccine." The schedule is 12-15 months and 4-6 years. The clarifying footnotes are the one on late schedules and one specific to this notice that is not in the General Recommendations, saying "Single-antigen measles, mumps or rubella vaccines should be used only if there is a specific



contraindication to one component of MMR vaccine, or the child is known to be immune or adequately vaccinated for one or more of these diseases, or measles vaccine is indicated for a child prior to one year of age (e.g. during outbreaks among preschool-age children)." There's also a footnote saying, "The second dose of MMR vaccine may be given at entry to middle or junior high school."

Dr. Hadler said there had been two comments on the Notice. One was that single-antigen mumps vaccine should only be used for outbreak control. The second comment was a question, "Is the use of single-antigen measles vaccine for the second dose of the MMR series compliant with the Notice?"

Dr. Hadler noted that the current ACIP statements do not explicitly recommend two doses of either mumps or rubella vaccine. The mumps statement predates the 2-dose recommendation, while the rubella statement acknowledged that "many persons will receive two doses of rubella vaccine as a result of the new two-dose schedule for MMR vaccination, which is recommended to improve control of measles."

The proposal for a vote was:

The ACIP recommends the number of doses, schedules and qualifications as noted above and in the text of the Dec. 16, 1993 Notice, with the clarification in text and table that single-antigen vaccines may also be used for outbreak control, but that routine vaccination should only be completed with MMR.

In answer to a question, Dr. Hadler clarified that the law covered children through 18 years of age. Dr. Orenstein suggested that a statement be included acknowledging the differences in the recommendations between the AAP and the ACIP. He offered to write the specific wording and distribute it that afternoon.

Noting that Dr. Orenstein's phrase to that effect would be added, members voted on the proposal. The motion carried (7 in favor [Drs. Davis, DeBuono, Edwards, Halsey, Jackson, Ramirez-Ronda, and Rabinovich]; 0 opposed; 3 abstaining [Drs. Clements, Ward and Hardegree]).

#### ACIP Statement on Varicella Prevention

Dr. Sandra Holmes outlined three key issues. First was some wording on the issue of simultaneous administration of varicella vaccine with other recommended vaccines. Upon the suggestion of a liaison member, the wording about 6-week intervals--if varicella vaccine and MMR will be given separately--was changed to a 4-week or greater interval. Second, was the addition of a more specific statement on the immunization of adolescents over 13 years of age and adults; and 3) the addition of a more detailed statement on the immunization of health care workers (HCWs). An appendix on the prophylactic use of Acyclovir was also added.



Following this presentation and a brief discussion, the group minus those members who had affiliations with MSD) voted to accept the following:

Certain risk groups should be targeted for varicella immunization programs (see below); however, all persons 13 years of age and older with a history of varicella should be offered vaccination at the time of any routine health care visit.

The motion carried, but three members abstained.

Regarding the HCW section, members suggested that a couple of sentences about infectivity of break-through cases be added. Dr. Tony Robbins asked if this section had been shared with OSHA and NIOSH. It was also suggested that the following sentence, on p. 30, be deleted from the "Pregnant" section because there are no data to support it:

Because the virulence of the attenuated virus used in the vaccine is less than that of the wild-type virus, the risk to the fetus, if any, may be even lower.

It was also pointed out that the use of acyclovir for women who get varicella in pregnancy is never addressed and should be. Finally, it was suggested that the paragraph on "Children with Conditions Requiring Steroid Therapy" could be clearer regarding inhaled steroids; could possibly be combined with that on altered immunity (p. 29); and that the draft wording for the AAP statement, which is much more specific, be shared with Dr. Holmes. Comments were to be submitted in writing to Dr. Holmes by March 23.

Dr. Hardegree was then asked to comment on the discussion of varicella vaccine at the January meeting of FDA's Vaccine Products Advisory Committee. She said that the advisory group was asked to address several questions on safety and efficacy of this product in children 1-12 years of age and to comment on the adequacy of the single dose in that age-group. The advisory group was also asked to address whether or not the safety and efficacy data supported the use of 2 doses in persons over 12 years of age and to address comments related to the adequacy of the data regarding simultaneous administration. Her recall was that the group recommended that the data supported the use of one dose in children but that the postmarketing studies would need to keep close tabs on whether or not a second dose could be needed. The group wanted to see additional data on simultaneous administration. There was also discussion about whether additional modeling was needed to predict the changes in the epidemiology of the disease induced. The group emphasized the need for long-term surveillance data. The FDA continues to review the application and to work with the manufacturer on this application, she concluded.

#### Update on the National Vaccine Program (NVP)

Following a break for lunch, Dr. Tony Robbins of the NVP said that it is putting together a new working group on the introduction of new vaccines. NVP recognizes that every time this subject is discussed, the ACIP, FDA, NIH, and



HCFA are involved. He said there needs to be developed for the United States a strategy of what we go through, what we look at when we're considering the introduction of a new vaccine.

He then reported that the NVP had also gotten involved recently in a problem around technology transfer. He said the NVP discovered that the new federal law and rules may not be properly suited to vaccines. When a small firm wanted to get some measles strains to study and to work on improving measles vaccines, the upfront price was very high, with much less concern about what would be charged down the road. The NVP recognized that that might be a very useful approach at recouping costs for pharmaceutical products and things that were evidently going to produce a high profit in the end, but it was probably not a great strategy for getting more researchers and more companies working on vaccine problems--that one should really lower the barriers on the front end and simply make sure the government understands what its purposes were in the long run. And the NVP found that NIH and CDC had never had a separate set of policy guidance for vaccines and they were eager to have this. So the NVP is setting up a working group on technology transfer and vaccines.

Third, the NVP is working on what Dr. Robbins termed the long-standing problem between FDA and CDC regarding labels. Finally, the NVP is working on increasing the number of sites at which underinsured class of children can receive free vaccines.

#### High Risk of Vaccine-Associated Paralytic Polio (VAPP) in Romania

Dr. Peter Strebel reported that since 1970, Romania has reported exceptionally high rates of VAPP. The leading hypothesis for this was that Romanian-produced OPV had increased neurovirulence. According to WHO, in 1990, WHO recommended that the Romanian OPV be replaced with imported vaccine. Yet, even with imported OPV, the relative risk of acquiring VAPP remained more than 15 times the rate of VAPP in the United States. A case-control study suggests that exposure to intramuscular (IM) injections may be associated with VAPP. He reported that 27 VAPP patients had received a mean number of 17 IM injections versus 3 injections among 77 controls. Ninety-five percent of the injections were antibiotics. There was a strong association between receipt of one or more IM injections during the 30 days prior to paralysis onset and vaccine-associated disease. Among recipient VAPP cases, the bulk of risk was with injections received after receipt of OPV. He concluded that IM injections of antibiotics given during the incubation period of OPV may provoke paralytic illness.

#### U.S. Experience with VAPP

Dr. Roland Sutter briefly summarized the current experience with injections (during the last 30 days prior to onset of paralysis) and VAPP between 1988-1992 in the United States. His presentation focused on VAPP in immunologically normal persons, including recipients and contacts. All recipient cases did receive OPV with Hib vaccine and/or DTP; however, the interval between IM vaccination and onset of paralysis for nearly all recipient VAPP cases was outside the "high-risk window" for provocation.



poliomyelitis (i.e., 7-21 days). Only one contact case had an IM injection prior to onset. The low prevalence of IM injections in contact cases, and the fact that most IM injections (with vaccines) fell outside the high-risk window, both weigh against the initiation of a case-control study in the United States. Nevertheless, CDC will continue to collect and summarize data on injections and VAPP.

### Sequential IPV-OPV Schedule

Dr. Sutter then introduced several topics and speakers--reversion of poliovirus contained in OPV when given after IPV; sequential IPV-OPV study; follow-up on the IOM report; the impact of a sequential IPV-OPV schedule on VAPP; and option for vaccination policies.

Dr. Olen Kew spoke first, his main point was that reversion following OPV was similar regardless of the prior administration of IPV, and was not a serious issue for concern. Dr. Andrew Murdin reported on shedding and reversion studies. He concluded that a combined vaccination schedule reduces excretion and does not increase the proportion of isolates that contain revertant virus. He then examined the Canadian experience with a combined schedule. He concluded that vaccine-associated disease in Canada had only been reported from provinces that used OPV exclusively.

Dr. P. Ogra, Children's Hospital, Galveston, reported on his prospective studies and congratulated Dr. Murdin on his prospective studies. He felt that Dr. Kew was probably right that too much is being read into Ogra's reversion data. Nevertheless, his data do show reversions with both IPV and OPV, and IPV does not change the pattern.

Dr. J. Modlin presented data from a study on the immunogenicity and relative gastrointestinal immunity conferred by three different sequential IPV-OPV polio schedules and compared these to the standard schedule. The data showed that two doses of this particular IPV were somewhat less immunogenic for all 3 types of polio than other IPV preparations studied before and after this study. The IPV used in this study is no longer in production and is not available in the United States. Researchers did rule out a laboratory method artifact; further, there is no indication that the potency of his vaccine had declined.

A second finding was that, regardless of when OPV was introduced into the schedule, it produced a substantial boost in antibody titer. In the first, it appears that a sequential schedule is quite reasonable from an immunogenicity point of view. If we went to this schedule, however, Dr. Modlin predicted that an optimal sequential schedule would require two or three doses of IPV in the first 6 months of life, followed by two or three doses of OPV, and that the first dose of OPV might be administered as early as 3 months of age.

Dr. Sutter then summarized answers to the questions raised by the last IOM report:

- o Is wild virus circulating in the country? It is very unlikely.



- o What are the levels of immunity in young adults? They seem to be very high for polio type 1 and 2, but somewhat lower for type 3.
- o What are the levels of immunity in preschool-age children, particularly those in the inner city? For most groups, they were about 90%.
- o To what extent, in the United States, does OPV vaccine virus spread from vaccinees to contacts? Serotype 2 appears to be the most efficient in spreading; serotypes 1 and 3 are less efficient.

Dr. Sutter then discussed the potential impact of a sequential schedule on VAPP cases and cost-benefit estimates. He said that three VAPP cases would be prevented annually by going to the sequential schedule, and that the direct costs per case prevented was estimated at \$10.5 million for a 4-dose sequential schedule, \$34.2 million for a 5-dose schedule, and \$8.6 million for a 6-dose schedule.

He summarized by saying that he hoped the presentations had alleviated concerns about reversion, and that a sequential schedule moderately reduces VAPP cases (43%-51%), but at a very high cost per case prevented.

He pointed out that the purpose of the previous presentations was for the ACIP to decide whether or not to change polio vaccination policy, and, if so, how. The Committee's choices were a decision for no change; a decision to change to a permissive recommendation allowing either OPV only or a sequential schedule; or choosing a sequential IPV-OPV recommendation.

After discussion, it was decided that there was no consensus for a change. The group decided to delay a vote until licensure for a combined vaccine is in the works, at which point the item should be put back on the agenda. Meanwhile, it was suggested that an ACIP member be added to an IVAC subcommittee on new vaccines.

### Postexposure prophylaxis for Hepatitis C

Dr. Miriam Alter discussed postexposure prophylaxis for hepatitis C, targeted mainly at HCWs. She explained that the current ACIP recommendations (published in 1990) state:

For persons with percutaneous exposure to blood from a patient with PT-NANB hepatitis, it may be reasonable to administer IG (0.5 ml/kg) as soon as possible after exposure. In other circumstances, no specific recommendations can be made.

She asked the Committee to consider whether the ACIP should no longer recommend immune globulin G (IG) after percutaneous exposures because recent studies indicate that IG does not protect against infection with HCV. The group voted unanimously to rescind the previous wording and accept her new wording, which was:

Recent studies indicate that immune globulin does not protect against infection with HCV. Thus, available data do not support the use of IG for postexposure prophylaxis of hepatitis C. There are no data on the



efficacy of IG for postexposure prophylaxis of other (non-HCV) parenterally transmitted non-A, non-B hepatitis.

She also asked the Committee to decide whether it should recommend a "hepatitis C protocol" for the follow-up of HCWs who sustain a percutaneous (and permucosal) exposures. These would include testing of the source for anti-HCV, baseline and follow-up testing of the exposed employee for anti-HCV, and counseling of the exposed employee regarding risk of infection and transmission to others. She said data are limited on the risk of transmission after percutaneous exposure and on the types of exposures that do result in transmission. The total cost of such a screening program would be \$2.1-\$4.2 million for an estimated 245-490 cases a year, 12-25 of whom would respond to therapy-- for a cost per patient of \$167,000.

In follow-up discussion, members asked about the status of the ACIP document on HCWs; they were told it awaits only the sections on hepatitis B, varicella and BCG. It was suggested that that document could include a good description of the HCW problem and make a case for screening. Another member suggested that the ACIP withhold its judgment on this matter until the Committee can view that revised document and then come to a scholarly decision. Dr. Alter was asked to mail some alternative wordings regarding universal screening to members.

#### Discussion of Responses to Proposed F.R. Notice on the Schedule Recommended for the VFC Program--continued

##### Polio Vaccines--continued

Discussion then returned to voting on what to include in the VFC program. Dr. Hadler returned to the polio issue and the critical footnote that "enhanced, inactivated IPV may be substituted for OPV, using a different schedule." This is really not consistent with current ACIP recommendations, he said. The issue for vote was:

The ACIP recommends the number of doses, schedule and qualifications as noted above and in the text of the current Notice, with the clarification in text and footnotes that OPV is the recommended vaccine for routine vaccination of normal infants and children. Any changes in recommendations that are endorsed by the ACIP in the June 1994 meeting will be incorporated into the final notice.

Dr. Orenstein recommended using the same language as used in the AAP recommendations. Mr. Malone said he had that and would present it later. Persons with support from Lederle Laboratories, Pasteur-Merieux-Connaught were to abstain. The vote carried (6 in favor [Drs. Davis, C. DeBuono, Jackson, Ramirez-Ronda, and Ward]; none opposed; 2 abstentions [Drs. Edwards and Halsey], and 2 absentees [Drs. Schoenbaum and Thompson]).

Dr. Rabinovich was concerned that manufacturers' labels might not be consistent. Dr. Halsey said this would not be the first time that recommendations were inconsistent with labels. Dr. Orenstein reminded the



group that the ground rules for the meeting were "no changes in the ACIP schedule," and this would require a change. It was decided to move on.

However, Dr. Hardegree suggested it would be helpful for the ACIP, in the future, to provide manufacturers with all the data that led to making changes in recommendations so that the manufacturers could adjust their labels, if necessary.

#### Votes on Vaccines for Hepatitis B

Discussion then moved to the next votes, on hepatitis B vaccines. Dr. Hadler said that the current notice proposes the following vaccines be used for prevention of these diseases: Hepatitis B vaccine and Hepatitis B Immune Globulin (HBIG) (for infants born to HBV-carrier mother).

The vote read:

The ACIP recommends that the vaccines listed above be included in the Vaccines for Children Program.

In response to a question, Dr. Orenstein said the NIP has purchased HBIG-- even though it's not technically a vaccine--and included it as a fundamental part of its hepatitis prevention program.

An ACIP member said that HBIG was not provided in her state under universal purchase of vaccine and perhaps other states as well.

It was suggested that the parenthetical phrase ("for infants born to HBV-carrier mothers") be deleted since the ACIP hasn't gotten into such specifics on the other votes. However, state health personnel seemed to feel it should stay in. Dr. Halsey decided to have two separate votes.

The first vote was on including the parenthetical phrase, "for infants born to HBV carrier mothers". MSD, Cutter and Abbott support called for abstentions. This vote did not pass, so the phrase was deleted from p. 18 of Handout #1. [Vote tally was 3 in favor (Drs. DeBuono, Jackson, and Ramirez-Ronda); 3 noes (Drs. Davis, Edwards, and Halsey); 3 abstentions (Drs. Clements, Ward, and Hardegree); and 2 absentees (Drs. Schoenbaum and Thompson)].

Receivers of support from MSD and SKB could not vote on the next issue, which was the vaccines to include for hepatitis B (p. 18 of the Handout #1). The vote was 7 in favor [Drs. Davis, DeBuono, Edwards, Jackson, Ramirez-Ronda, Dr. Hardegree, and Dr. Rabinovich]; none opposed; 3 abstentions [Drs. Clements, Halsey and Ward]; and 2 absentees [Drs. Schoenbaum and Thompson].

The next vote was on the schedule for hepatitis B (p. 19 of Handout #1), with attendant footnotes. Drs. Hall and Orenstein addressed the wording of the generic, permissive footnote tying ACIP and AAP recommendation together. Dr. Hadler then read the following:

These are the footnotes in the Dec. 16 F.R. notice, which were added to note acceptance by the ACIP of the American Academy of Pediatrics' alternative schedules, and which will be revised in the final notice to reference the AAP by name.

Mr. Malone said that there was a problem with the ACIP just endorsing, generically, AAP recommendations--because of a delegation of governmental function problem. Therefore, each issue for which the ACIP wishes to accept AAP as an acceptable alternative needs to be addressed directly. There was no problem with referencing the AAP as long as it's the ACIP deciding that it's OK to have that as an alternative schedule.

What this language would do is change what's already out in the Dec. 16 F.R. as footnotes and mention specifically by name that AAP was behind that particular recommendation.

Dr. Halsey asked Mr. Malone to draft acceptable wording for a vote on the AAP/ACIP matter before 6:00 p.m.

Dr. Hardegree asked that the record show that several of the levels do not necessarily meet the options that were listed here.

Dr. Halsey then proposed the following for vote (from pp. 19-20 of Handout #1):

The ACIP recommends the number of doses, schedule and qualifications as noted above and in the text of the Dec. 16, 1993, Notice.

Persons receiving support from MSD and SKB were excluded from voting. The vote carried (6 in favor [Drs. Davis, DeBuono, Edwards, Jackson, Ramirez-Ronda, and Rabinovich]; no nay's; 4 abstentions [Drs. Clements, Halsey, Ward, and Hardegree]; and 2 absentees [Drs. Schoenbaum and Thompson]).

Dr. Hadler then read the following proposal:

The ACIP encourages use of DTP-Hib vaccines (combined or licensed for combined administration) when receipt of each antigen of the combined vaccine is indicated; however, at this time, the ACIP does not restrict separate administration of DTP and single-antigen Hib vaccines. The Department should complete contracts for both single-antigen and multiple-antigen products.

Dr. Halsey announced that support from the following companies required abstention from the vote: for DTP--Connaught, Lederle, Massachusetts Dept. of Public Health, Michigan Dept. of Public Health, Wyeth-Ayerst for DTP-Hib--Lederle Praxis, Pasteur-Merieux-Connaught, and MSD.

The vote carried (4 in favor [Drs. Davis, DeBuono, Rabinovich, and Ramirez-Ronda]; 0 opposed; rest abstained).

Dr. Hadler then asked members to vote on the following:



Any use of brand names in ACIP OBRA documents is not intended to mandate purchase of particular brands of vaccine, but rather is intended for identification purposes only.

This is already in a footnote on a table, but was voted on to put it on the record. The vote, when taken, was unanimous for this proposal.

Dr. Hadler then asked for a vote on the following clarification of terms:

Use of the phrase "combined DTP-Hib vaccine" in ACIP OBRA documents includes any DTP and Hib vaccines which are either combined or are licensed by the FDA for combined administration.

Anyone who was excluded from the previous combined statement was also excluded from this vote. The vote carried (5 for: Drs. DeBuono, Ramiriz-Ronda, Davis, Hardegree, and Rabinovich; 0 opposed; 5 abstained [Drs. Clements, Edwards, Halsey, Jackson, and Ward]).

Dr. Hadler then read the following "reconciliation of ACIP recommendations with ACIP OBRA recommendations":

The ACIP requests NIP staff to review the current ACIP recommendations to identify any inconsistencies with the ACIP OBRA recommendations adopted at this meeting for the purpose of reconciliation of those recommendations at the next meeting of the ACIP.

Rather than vote, Dr. Halsey asked if there was a consensus to ask the NIP to compile inconsistencies in AAP, ACIP and ACIP OBRA recommendations, bring them back to the ACIP in the form of a mailing well in advance of the next meeting, and provide the ACIP with some opportunity for adding some issues to the agenda for the next meeting. All were in agreement.

Dr. Hadler asked the FDA to help NIP with this project. Dr. Hardegree agreed.

### Scope of the Notice

Dr. Hadler said that the last set of issues dealt with scope of the notice (pp. 21-22 of Handout #1). Basically, there are three issues that have been raised--Should the hepatitis B risk-groups for which the vaccine is recommended be included? Should any clarification be provided for measles second-dose cohorts? Should pneumococcal and influenza vaccination of high-risk groups be included?

The law does not give specific guidance on this. CDC has attempted to estimate the numbers of children to which these recommendations would apply (see p. 21 of handout).

Dr. Orenstein clarified that, under universal purchase, a state will take what is covered in this program, and then add funds--either federal grant funds or their own funds--to purchase all vaccines for all persons. There are currently 12 such states; another 12 suggested that they were interested in



it. As the ACIP considers all of these recommendations, the more that is added on to the program, the more any state considering universal purchase will have to also add. Dr. Orenstein also said that, in terms of the general recommendations, the ACIP might wish to consider universal recommendations for any of these.

Dr. Hadler said that, when NIP started examining OBRA, NIP's initial reaction was that universal routine vaccines would be included and the notice was drafted accordingly. It wasn't until staff looked at the language that they saw it didn't say universal and it didn't say routine. NIP is now trying to clarify these issues.

Many ACIP and liaison members expressed their opinion that high-risk adolescents be included for hepatitis B. Accordingly, Dr. Halsey asked Dr. Hal Margolis to briefly summarize his presentation from the next day on this subject. Dr. Margolis said that his presentation would deal with a catch-up immunization for high-risk Asian populations and adolescents. He noted that the AAP does basically take a stand supporting catch-up immunization and says "all adolescents." But there are some programmatic issues of implementing that. He said that adolescent immunization is obtainable, at least in certain program settings. He said his program hoped to see the Committee make a strong, catch-up adolescent immunization recommendation by the end of the year.

One ACIP member expressed concern about moving too quickly through some of these more troublesome areas without having the necessary review time. She asked if this decision could be delayed until June.

Dr. Orenstein said that the more that could be done at this meeting, the easier it would be for NIP. The same ACIP member said that the funding and implementation issues are important concerns, when states move toward universal coverage. She noted that the infrastructure to support infant and child immunization differed in most states from the infrastructure for adolescents and adults. The importance of combining as many vaccines as possible during the adolescent period in one visit was very critical since getting adolescents into care is difficult. She wanted time to think this matter through.

Dr. Halsey asked for 2 or 3 alternatives regarding adolescent and other high-risk groups be drafted and placed in front of members for vote. Drs. Edwards, Schaffner, and DeBuono volunteered to work with Dr. Margolis and Frank Mahoney on these.

Returning to the catch-up, second dose of MMR, Dr. Hadler said the question was, can it be purchased for all cohorts of children 6-18? The language in the current ACIP recommendation is permissive. Currently, 36 states require it for at least one cohort of children; 4 states require this for all school attendees (K-12), and 16 others for 2 or more cohorts. So the movement toward this is already underway. He said that an estimated 20-30 million doses had been distributed already.



Dr. Halsey said that he was concerned, from discussion thus far, that the wording of some of ACIP's votes and recommendations might carry obligations to states. And that's not what most of members had intended. The ACIP had been trying to make it possible, but not necessarily obligatory. He asked those drafting the wording of the 2-3 alternatives for high-risk groups to see if they could find some language that would allow this to be done where it is possible and practical without mandating it.

Mr. Malone cautioned that NIP would be putting out bids for contracts, where minimum purchases would be guaranteed. So if the ACIP increased purchases, then later rolled it back, CDC would be buying a lot of vaccine. He said if members thought there was a chance of that, he would recommend putting this issue on the table for now.

Dr. Orenstein said it would be useful to set up some working groups to discuss this between now and June to come to the Committee in June with some firmer recommendations that have been thought through--as opposed to trying to force it.

The meeting adjourned for the day at 6:35 p.m.

The meeting reconvened the next day at 8:08 a.m.

#### Adolescent Vaccination against Hepatitis B

Dr. Margolis updated the Committee on the action plan for eliminating hepatitis B virus transmission. The plan has three phases: 1) universal screening of pregnant women for HBsAg; 2) universal immunization of infants; and 3) catch-up immunization of adolescents and high-risk children and of selected high-risk adults.

Next, Dr. Mahoney reported on the current status of the infant program. He said that the prenatal program has been well integrated into prenatal care; screening is increasing; but universal screening has not occurred. State laws and hospital policies both improve program effectiveness. Regarding the infant vaccination program, data clearly indicate that attitudes of providers are changing. A high percentage of infants are being vaccinated at birth--mainly determined by the standards set by hospitals. In fact, hepatitis B vaccination in the public sector may be approaching the coverage levels of other vaccines.

Dr. Margolis then introduced adolescent issues (what he termed phase 3 of the strategy). Dr. Brad Woodruff updated the ACIP on the effectiveness and feasibility of adolescent hepatitis B immunization. He described five projects throughout the United States to vaccinate this group. He concluded that hepatitis vaccination is feasible in a variety of settings, including schools, detention facilities and residential institutions. Adolescent vaccination, however, requires flexible programs and flexible schedules, especially school-based vaccinations. Education about hepatitis B and vaccination against it does motivate adolescents to seek vaccination. Consent is obtained more often among white students than black and among younger students than older ones. Further evaluation is needed on the best



age to vaccinate in schools; the best motivators to maximize coverage; and the most-efficient way to vaccinate in schools.

Dr. David Scheifele reported that the province of British Columbia started a program for hepatitis B immunization of sixth-graders in the fall of 1992 (population: 45,000). The uptake for first doses averages 94%. The completion rate the first year was 92%. The program is continuing this year.

#### Votes on Hepatitis B

Dr. Halsey said that the ACIP would like to come up with a strategy for buying the vaccines for all the high-risk groups.

Dr. Joel Ward proposed a strategy for the high-risk vaccines, which comprised hepatitis B, influenza, and pneumococcal vaccine. He sketched some questions that he hoped a working group or the program people might be able to address for each of these three vaccines [Handout #3]. In this way the ACIP could assess how big these high-risk groups are; what the morbidity and mortality is for each group; what health care costs would be prevented by this strategy; a cost assessment; how many doses; and implementation problems and issues.

Dr. Halsey noted that a careful laying out of options, their impact, and programmatic issues was necessary.

Dr. Orenstein asked that two things be added to the charge to the working groups: 1) second dose of MMR and the whole issue of catch-up and 2) adolescent immunization for hepatitis B.

Dr. Halsey asked the Committee for a sense of how to go--whether to come up with a specific recommendation today to purchase vaccines or whether to form a working group to come up with a recommendation that will incorporate some of the planning for the implementation for the June meeting. Since there was clearly a division among the ACIP and the liaison members, he asked for a vote on whether to move ahead with a vote about purchase of pneumococcal and influenza vaccine under the purchase program, today. He asked those in favor of forming a working group to come up with a specific programmatic plan to present to this meeting in June to raise their right hand.

A member asked what the intent of the law, as written, was. Dr. Broome said that CDC has looked into this in detail, and the law is not clear. These groups weren't even considered when the law was framed--they were only looking at childhood immunization. She said she thought a case for coverage could be made, but that having a well-reasoned program, implementation strategy and a sense of what this will involve would be helpful in moving forward into areas that she believed were not considered when the law was passed.



There was considerable discussion about whether to have working groups come up with a plan and present it for a vote in June or whether to take a separate vote on influenza, right now, and one on pneumococcal vaccine in June.

Dr. Halsey asked that the group deal with the issue on which there appeared to be agreement, namely, a vote in principle that the ACIP is interested in trying to improve delivery of immunizations to high-risk groups, including adolescent hepatitis, influenza, and pneumococcus. There was consensus that that is the long-term desire of the Committee.

Dr. Halsey then reiterated the two options: 1) to form working groups and put off the vote until June; 2) to vote on influenza now and put off pneumococcus until later. The vote for option #1 was unanimous.

Dr. Broome announced that people with potential conflicts of interest could be on working groups but should not chair them.

#### IOM Report on Adverse Reactions and Contraindications to Vaccines

Dr. Bob Chen referred the ACIP to a memo that had been mailed to them from Jessica Tuttle, which updated the current ACIP statements in accordance with the IOM report.

Dr. Orenstein announced that the law had changed regarding the vaccine information materials so they can be simplified and shortened. One criterion is that the risks have to be clearly mentioned. The NIP wants these vaccine information forms revised by the end of April. Therefore, he requested that the Committee decide which adverse events not already in the form be added.

Next, Dr. Rabinovich said that PHS will be conducting a scientific review of the IOM report on March 15. The thoughts of the ACIP will be presented.

Then Dr. Tuttle reviewed the recent activities of the working group, appointed after the October 1993 ACIP meeting to review the impact of the IOM report on ACIP recommendations. The group consisted of Mr. McCone, and Drs. Clements, Jackson, Halsey, Orenstein, and Ward. The Annex to Handout #4 details the adverse events identified in the IOM report and proposed language to make the corresponding ACIP statements consistent. She then focused on some of the more controversial adverse events--OPV and Guillain-Barre syndrome (GBS); tetanus-toxoid-containing vaccines and GBS; and combined MMR and thrombocytopenia--and asked that comments about ones not discussed be mailed in.

#### GBS and OPV

First, Dr. Tuttle reported on a reanalysis of a Finnish study and an observational study done in the United States, which provided evidence against a causal relationship between GBS and OPV. She read a proposed change to that effect (see p. 5 of Annex to Handout #4). Dr. Broome said it would be useful for the ACIP to suggest to the authors that a re-analysis be published.



A vote was taken about the acceptability of this wording to the Committee. Those with Lederle conflicts of interest abstained. The vote was 6-0-3, with one absent.

#### TT and GBS

Dr. Tuttle then reviewed estimates of risk of GBS following DTP. The group decided to postpone a vote on this until later.

#### MMR Vaccine and Thrombocytopenia

Dr. Tuttle then referred members to pp. 6-7 of the Annex. The group changed one line in paragraph one (p. 7) to read as follows:

"In prospective studies, the reported incidence of clinically apparent thrombocytopenia following MMR ranged from 1 per 30,000 to 40,000. . ."

Dr. Halsey asked Dr. David Nalin of MSD to write a letter for the record on Merck's data on thrombocytopenia and MMR. Basically, there's never been a fatal case and MSD does not believe the data warrant physicians checking platelet counts. It was decided that Dr. Tuttle would combine these comments with any written ones submitted after the meeting into proposed wording, which could then be voted upon.

#### Incorporating Changes into ACIP Statements

Dr. Tuttle then asked the ACIP to address how these changes would get incorporated into previous ACIP statements. The group decided to have an official, brief ACIP response and commentary on the IOM report in the MMWR and perhaps insertions about changes, upon request, in the individual ACIP statements. As no consensus was reached regarding this, options for incorporating changes will be brought up for discussion again at the next ACIP meeting.

#### Simplification of the Vaccine Schedule

Dr. Jacqueline Gindler summarized the work of Drs. Hadler, Stuelkel, Watson, Hall, Halsey, and herself to simplify and unify the ACIP and NIP immunization schedules. She proposed five routine and two flexible options for schedules. She said the NIP would like a working group to be formed and meet within the next month to agree on a schedule.

It was decided to form such a working group and to have member and liaison members (as consultants) on it. Drs. Hall and Halsey were named co-chairs. Other members or consultants asked to serve on the group were Dr. Edwards, Hardegree, Peter, Rabinovich, Thompson, and Zimmerman. The group was asked to report recommendations back before the June ACIP meeting so the decision could be made then. Dr. Broome emphasized that the full group would make the decision.



Dr. Rabinovich announced that on March 4 an inter-agency meeting would be held to discuss changes in schedule in detail.

An MSD representative offered to be a consultant to the working group. Dr. Rabinovich said she thought it was appropriate to have a mechanism for manufacturers to have input. Dr. Halsey agreed and said that he chairperson could arrange that.

#### Formation of Working Group for High-Risk Populations

This group will deal with hepatitis B, the second dose of MMR, influenza, and pneumococcal vaccines. Dr. Halsey proposed the following members: Dr. DeBuono, Dr. Fleming (consultant), Dr. Schoebaum, Dr. Ward, Dr. Bill Schaffner (as consultant), Dr. Jeff Davis (as Chair), Dr. Jackson and Dr. Glezen.

#### New Language on VFC Program Purchases

Dr. Robbins proposed the following new language to recognize the value of other schedules:

The Committee has adopted schedules for administering vaccines. The Committee also finds that vaccine schedules of the American Academy of Pediatrics published in the 1994 edition of the Report of the Committee on Infectious Diseases (The Red Book) may be followed by Vaccines for Children program providers.

It was decided there needed to be a process for the ACIP to formally review the AAP recommendations. Dr. Peter agreed to provide members of the ACIP with the 1994 Red Book.

#### Update on the Injury Compensation Program

Dr. Thomas Balbier from the National Vaccine Injury Compensation Program reviewed major accomplishments of the program for 1993 and referred members to a nice article about the program in the Journal of Infectious Diseases, written by Dr. Sam Katz.

#### Update on Large-Linked Database Studies of Adverse Events

Dr. Hadler then gave a brief update on the large-linked databases to monitor adverse reactions. It was suggested that the ACIP get a 2-3-page summary mailing of the plans for this data system and that the topic perhaps be placed on the agenda for the next meeting.

#### Status of the Development of New Vaccine Information Statements

Ms. J. Gantt said that CDC has contracted with the University of Rochester School of Medicine and Dentistry to rewrite and simplify (to 4th-grade reading level) vaccine information statements (VIMs) for the antigens in the Vaccine Injury Table (DTP, Td, MMR, and polio). It will be tested on parents and physicians. Full implementation of the new VIMs is expected by October



1, 1994. Dr. Edwards asked if hepatitis B and Hib VIMs will be generated as well; Dr. Gantt said yes, but not immediately.

#### Update on Typhoid Recommendations

Dr. P. Cieslak passed out the revised draft statement for ACIP on typhoid immunization. All suggestions from previous meetings were incorporated. A table of common adverse reactions was added, as was a section on "Choice of Vaccine." A footnote will be added to the table noting gastrointestinal side effects.

#### Status of BCG Guidelines

Dr. Broome summarized the work of three advisory groups that are working together on such guidelines. The Advisory Council for the Elimination of Tuberculosis raised several relevant issues, specifically, subsequent program implications for maintaining skin-test surveillance in such populations where BCG has been used; interpretation of the possible booster effect of skin testing in those who received BCG vaccination; and what should be recommended for prophylaxis in vaccinees who were exposed to a drug-sensitive case. That committee thought these issues should be addressed in the statement, so additions are being made.

A joint working group to look at the next version of the statement and iron out any problems was also appointed. It has 2 members from ACIP (Drs. Edwards and Halsey), 2 from ACET [Drs. Schecter and Nolan], and 2 from HICPAC. Dr. Halsey will be the chairperson.

#### Update on FDA Committee Meeting on BCG

Dr. Hardegree said that last October FDA had a review of the BCG meta-analysis information that had been presented to ACIP. One of the manufacturers presented new data on BCG for prevention of TB in children. The group felt that the data did support the efficacy of BCG for very narrow indications. FDA is continuing its review. Dr. Halsey said he hoped to have something on BCG available for final approval in June.

#### DTP and GBS

This topic had been deferred from the morning's discussion of the IOM Report on adverse events. Dr. Chen reported his recalculation of the association of GBS following DTP, as assessed in a recent study in Los Angeles. Among children 2 years old or older, the expected number would be 1.3-3.5. Among children 5 or older, the expected number of cases would be 0.6 to 2.2. The numbers of observed cases were lower than those expected by chance.

Dr. Halsey read the proposed change there to be voted on. The following changes were made:

[in Side Effects and Adverse Reactions" replace "due to" with associated with, as follows: "Persons with a prior history of GBS associated with a particular vaccine may be at increased risk of recurrent GBS. . ."]



[in "Precautions and Contraindications" section, add the following underlined phrase: "A previous episode of GBS within 6 weeks following a tetanus-containing vaccine is a contraindication to additional doses. . ."]

However, the members were not comfortable voting on this, and the matter was sent back out for review--to emphasize the rarity of the event. The program was asked to revise this section and mail--perhaps with additional, separate language for adults and children--to all ACIP members.

### Vaccination against Hepatitis A

Dr. Craig Shapiro said that both SKB and MSD have efficacious inactivated hepatitis A vaccines. MSD's data have been previously presented to the ACIP and subsequently published. Data from the unpublished study of SKB's vaccine were presented by Dr. Bruce Innis from the Walter Reed Army Institute of Research.

Dr. Innis said that a double-blind, randomized, controlled, community-based study in 148 communities in Thailand, completed about a year ago, showed that the SKB vaccine's efficacy after 2 doses was 94%.

Dr. Shapiro summarized by saying that both the SKB and MSD vaccines have been studied in numerous trials and schedules. Findings are that these vaccines are highly immunogenic; after 2 or 3 doses, generally 100% of people have antibodies. In general, the reactogenicity profile is acceptable. Data on infants are much more limited.

We then reviewed the epidemiology of this disease in the United States, where periodic large epidemics occur about every 10 years. In 1992, some 23,112 cases were reported to CDC. In a study in Washington state in 1990, on average, case-patients with hepatitis lost 27 days from work; 1% were hospitalized; and they had an average of four health-care provider visits. The total cost of illness was related to age: for those older than 15, \$2,500; for those under 15, \$400. Estimates of the total annual cost of hepatitis A in the United States are about \$200 million. The case-fatality rate is 0.4%. Cases in children account for about 30% of cases, but because their infections are often asymptomatic, this is probably an underreport. He said disease among recognized risk groups such as travelers represent a limited percentage of cases. Children play an important role in disease transmission in many settings. Therefore, to really have a significant public health impact, hepatitis A vaccination would have to be used on a widespread basis.

Dr. David Nalin then reported on data from the Monroe County efficacy trial with this Merck vaccine. It is so efficacious that the trial was stopped and all controls given vaccinations. No subsequent cases of hepatitis A have occurred in the community, which had an on-going problem with this disease. The vaccine gives 100% protection after a single dose. After 1,500 doses, no serious vaccine-adverse events have been reported.



Dr. Shapiro said his section was drafting guidelines on hepatitis A vaccination. Dr. Halsey asked him to come up with a draft. Dr. Clements volunteered to work with him on preparing this.

#### Public Comment

Dr. Halsey asked if any members of the audience wanted to make a public comment. Ms. Kovach said no one had requested one, but if such a request was made, she would inform Dr. Halsey.

#### U.S./WHO Influenza Vaccine Recommendations for 94/95

Dr. Nancy Cox briefly reviewed worldwide influenza activity and the vaccine recommendations for the next flu season. Flu activity started early, with local outbreaks of influenza A(H3N2) in Louisiana, Scotland, and the United Kingdom. Quite severe epidemics were reported in November and December in western and northern Europe. Epidemic activity is on-going in the Russian federation and eastern Europe.

The WHO has recommended that the trivalent influenza vaccine prepared for the 1994-1995 season include: an A/Shangdong/9/93-like (H3N2) strain; an A/Singapore 6/86-like (H1N1) strain; and a B/Panama/45/90-like strain.

Dr. Joe Bresee then gave a brief update of U.S. flu activity. Following late summer outbreaks of flu, this season's activity increased steadily in the fall and peaked around the beginning of the year. It was declining steadily since then. This season has been associated with high excess mortality.

Dr. Nancy Arden then reviewed the boldface proposed revisions to the ACIP Recommendations for the Prevention and Control of Influenza. These revisions updated the recommendations for use of the vaccine and antiviral agents available for controlling flu, including information concerning rimantadine (which was approved for marketing last fall); antiviral resistance; and dosage precautions.

There is now a substantial difference between the Red Book and the ACIP recommendations about vaccinating children who demonstrate severe, anaphylactic reactions to eggs. (ACIP recommends consulting the physician; AAP recommends not receiving vaccine.) Dr. Arden asked about the rationale for the Red Book changes; Dr. Halsey said he believes the rationale was that such children would require yearly vaccination; with the possibility of increasing sensitization, it was best not to recommend vaccination.

Several members suggested leaving the ACIP wording because the two are not really inconsistent and a great deal of thought went into the wording. By consensus (no vote), the group decided to leave the ACIP statement regarding anaphylactic language as is.

It was suggested that children under 1 year be added as a high risk group for influenza vaccine. It was decided that that was premature for the day's discussion, but that the program should be asked to generate data on



reassessing the risk-groups for influenza and present them at future meeting.

The ACIP then was asked to approve the following language which differs from the Red Book:

Children at high risk for influenza-related complications may receive influenza vaccine at the same time they receive other routine vaccinations, including pertussis vaccine (DTP or DTaP). Since influenza vaccine in young children can cause fever, DTaP may be preferable in those children 15 months or older who are receiving the fourth or fifth dose of pertussis vaccine. DTaP is not recommended for the initial three-dose series of pertussis vaccine.

A vote was taken about whether to accept this wording as is, without the last two sentences. Excluded from voting were those with affiliation with Connaught Labs, Lederle, Park Davis and Wyeth. This wording was left as is. The vote count was: 3 in favor [Drs. Ronda, Ward and Rabinovich]; 1 opposed [Dr. Clements]; and 3 abstentions [Drs. Jackson, Edwards, and Thompson].

Next to be discussed was the section on antiviral agents. The paragraph was discussed:

In otherwise healthy adults, amantadine and rimantadine have been shown to reduce the severity and duration of signs and symptoms of influenza A infection when administered within 48 hours of illness onset. Studies evaluating the efficacy of treatment with either amantadine or rimantadine in children are limited, but the studies that have been conducted indicate that either drug can also reduce the severity and duration of influenza A illness in children. Amantadine has been approved by the Food and Drug Administration (FDA) for treatment and prophylaxis of all influenza type A virus infections since 1976, while rimantadine was approved for marketing in September 1993. By present FDA standards, there are insufficient data to assess the efficacy of rimantadine treatment in children. Thus, rimantadine is currently approved for prophylaxis in children, but not for treatment.

The group questioned the use of the word marketing and voted to delete the boldface sentence [above]. It was finally decided that Dr. Arden should prepare two alternative rewrites of this paragraph and show them to Dr. Caroline Hall, then FDA, and finally the ACIP for comment and vote. Dr. Arden was also asked to contact Donna Freeman at FDA about age cutoff data for rimantadine.

ACIP members were asked to return any written comments to Ms. Arden with copies to Ms. Kovach or Dr. Broome within 10 days (March 6) so that she can get it published in May in the MMWR. Committee Dr. Rabinovich then reported that the National Vaccine Advisory Committee approved a report on adult immunization. She suggested that be a future agenda item for an ACIP meeting.



Concern was then raised about having just two working groups. It was suggested that the high-risk one be separated into two groups for a total of three working groups. Another alternative suggested was that the CDC program address and make a proposal for adolescent immunizations and t the working group focus on high-risk immunizations. Dr. Halsey asked for one-hour block of time on the June agenda to deal with adolescent immunization. Dr. Davis, as chairperson of the high-risk working group, would h e the option of dividing the working group into two. Consensus was agree nt with this suggestion.

It was for a total of the CDC program t the working one-hour zation. Dr. e the option nt with this

The meeting adjourned.

I hereby certify that, to the best of my  
foregoing summary of minutes is accurate

owledge, the  
d complete.

Neal A. Halsey, M.D.  
Acting Chairperson, ACIP

Date:

